

**2016
COMMUNITY HEALTH
NEEDS ASSESSMENT
FOR
HILLSDALE HOSPITAL**



May, 2016

INTRODUCTION

Hillsdale Hospital is a not-for-profit hospital. Its roots in the community date to 1912 when Dr. & Mrs. Midgley came to Hillsdale with the hope of developing a sanitarium. The first facility was opened in 1915. In 1921, the City of Hillsdale assumed the responsibility for a new hospital located at its present site.

The hospital primarily serves the residents of Hillsdale County.

The hospital has undergone several expansions of its physical facilities over the years and has continually updated laboratory and diagnostic equipment. The hospital currently has:

- 47 acute care beds.
- 39 skilled nursing facility beds.
- A 10-bed psychiatric unit.
- A seven-bed joint replacement unit.
- Four surgical suites.
- An ophthalmology suite.
- A radiology department with a full complement of imaging services including a 64 slice computed tomography (CT) scanner and open magnetic resonance imaging (MRI) capability.
- High-tech critical care and emergency departments.
- A state-of-the-art laboratory.

To comply with the Affordable Care Act, nonprofit hospitals are required to complete a community health needs assessment (CHNA) every three years. An assessment was conducted in 2013 and a new assessment was undertaken in 2016. This report reflects the findings of the 2016 assessment with comparisons, where possible, to the 2013 results.

The 2016 CHNA included a survey of county residents, consultation with county leaders, and a comprehensive review of primary and secondary data as detailed in this document.

The CHNA was used to create an updated strategic plan for the hospital that can best address the health needs of county residents and create partnerships where necessary to address identified unmet needs.

HILLSDALE HOSPITAL REVENUE AND COMMUNITY BENEFITS

Hillsdale Hospital has an annual budget of \$58 million for its 2016 fiscal year.

A comparison of the last two fiscal years shows a modest growth in net revenue.

Hillsdale Hospital Fiscal Year Analysis, 2015 and 2014		
	FY 2015	FY 2014
Patient Revenue	\$60,643,102	\$56,893,779
Bad Debts	\$5,429,414	\$6,133,822
Net Patient Revenue	\$55,213,688	\$50,759,957

Source: Hillsdale Hospital FY Reports, 2015 and 2014

Nonprofit hospitals have traditionally offered programs and services that address identified health-related community needs. Many of these services are available without payment or at a lower cost, and serve to improve the health access and the health status of the community.

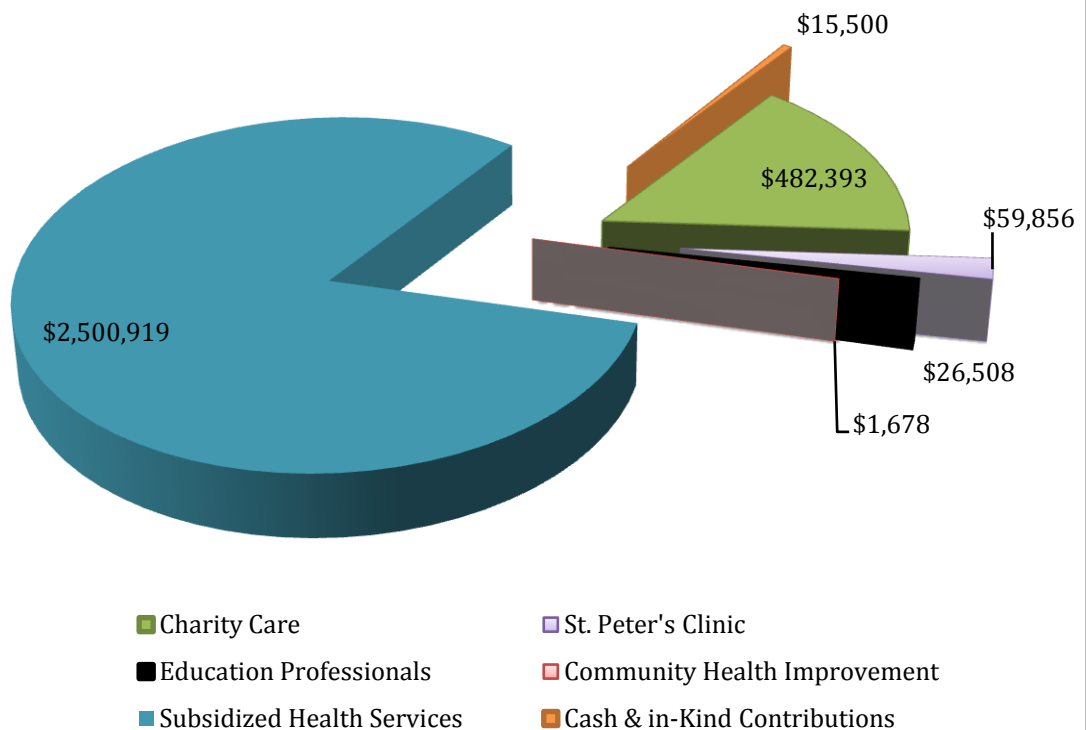
A comparison of Hillsdale Hospital's net revenue devoted to charitable endeavors shows a net increase from FY 2014 to FY 2015.

Hillsdale Hospital Net Revenue Dedicated to Charity, 2015 and 2014		
	FY 2015	FY 2014
Charity Care	\$482,393*	\$885,172*
Support of St. Peter's Free Clinic	\$59,856	\$169,590
Community Health Improvement	\$1,678	\$32,430
Health Professions Education	\$26,508	\$373,135
Subsidized Health Services	\$2,500,919	\$146,125
Cash and In-Kind Contributions	\$15,500	\$18,351
Total Community Benefits	\$3,086,855	\$1,624,803
Percent of Net Revenue	5.59%	3.20%

*Decrease attributed to Medicaid expansion.

Source: Hillsdale Hospital FY Reports, 2015 and 2014

Community Benefits, FY 2015, Hillsdale Hospital



Source: Hillsdale Hospital FY Reports, 2015

In addition to the direct reduction in revenue, the staff of Hillsdale Hospital provide hours of free service to the local community.

- In 2015, staff members gave 1,899 hours to the community at an estimated value of \$77,991.93.
- This is an increase from 2012 when the staff donated 1,351 hours at an estimated value of \$55,485.

In 2015, the hospital also:

- Conducted a food drive for Salvation Army valued at \$2,000.
- Raised money for the Flint Water Crisis.
- Donated approximately 100 turkeys valued at \$15 each to community food pantries.

THE COMMUNITY HEALTH ASSESSMENT SURVEY AND DATA COLLECTION

Hillsdale Hospital partnered with the Hillsdale County Human Services Network (HSN) to create a comprehensive community-based health needs assessment.

The HSN is the state-recognized community collaborative for Hillsdale County. It is a coalition of public and private non-profit health and human service organizations serving the county. The HSN has met on a monthly basis since 1986 to address issues of common interest.

Part of the health assessment plan was to distribute an assessment survey to the general population, gather secondary supportive data, and engage the HSN members in an open discussion of how best to meet the needs revealed by the process.

The HSN hired an independent contractor to help design the survey, analyze the data, facilitate discussions, and create the final report.

A list of the Human Services Network members, the expert individuals consulted, and the qualifications of this contractor can be found in Appendix A of this report.

Primary Data Collection

Primary data is collected directly from first-hand experiences or opinions. The primary data for this assessment consisted of a health survey of the general county population and an open forum of HSN members.

The health survey questionnaire was designed to create a profile of the respondents, their health needs, and views on community health-related issues.

All residents of the county were invited to participate in the survey through a wide-reaching informational campaign that consisted of:

- A front-page article in the local newspaper, the Hillsdale Daily News, appeared on November 11, 2015, to inform the general population about the purpose of the survey.
- The local radio station, WCSR, broadcasted radio spots encouraging community members to participate.
- Paper forms of the survey were sent to area seniors receiving Meals on Wheels, and were available at the Hillsdale office of the Branch-Hillsdale-St. Joseph Community Health Agency, the local free health clinic, and various food pantries. They were also distributed at other community events.
- Hospital volunteers approached patients awaiting treatment or lab work and asked them if they would complete the survey. Anyone over 18 who accompanied the patient was also asked to participate.

- The survey was posted on an internet survey site, Survey Monkey, and was accessible to the community from November 11, 2015 to January 31, 2016. Links to the on-line survey were displayed on the Hillsdale Hospital website (hillsdalehospital.com) as well as the Branch-Hillsdale-St. Joseph Community Health Agency (bhsj.org) and the Perennial Park (hillsdaleseniors.org) websites.
- Various civic groups were also approached and encouraged to participate.

The responses recorded on the paper surveys were manually added to the online survey tool for analysis.

As a result of this campaign, 1,110 individuals completed the health survey questionnaire, compared to 983 in 2013.

At the completion of the survey period, this primary survey data was analyzed to identify the specific health concerns of the respondents. An analysis of the respondents to the survey revealed:

- The sampled population was predominantly female. 69% were female and 31% male. This is an improvement from the 2013 survey when 75% of the respondents were female. But, in contrast, the population of Hillsdale County is approximately 50% male and 50% female.
- Respondents age 65 or over accounted for 32.5% of the survey sample, compared to 17.7% in the general population 65 or over. This is similar to what was found in the 2013 survey.
- Not all respondents answered every question. The data was analyzed based on the number who responded to the question.
- 95 respondents to this survey said they were not residents of the county. Their responses were included in the analysis.

Although the survey respondents were more likely to be female and older than the general population, the results may reflect the thoughts of a population more likely to need and utilize medical services.

Secondary Data Collection

Secondary data is gathered from outside reliable sources. This data is generally reported in forms such as:

- Actual or estimated numbers in a population.
- A percentage of a sampled population.
- Rates, or the number of people in a sample population, compared to a similar population.

Secondary data for this assessment was collected from a variety of county, state and federal sources to create a more complete profile of the population and current health needs. This report strived to use the most recent, complete, yearly data available.

The secondary data in this report came from sources such as:

- U.S. Census Bureau.
- Michigan Behavior Risk Factor Survey (MIBRFS). This data is gathered by an annual, statewide telephone survey of Michigan residents age 18 or older. The survey provides estimates of several behaviors, medical conditions, and health care practices for state residents. Because of the demographic similarity of Branch, Hillsdale and St. Joseph Counties, the MIBRFS reports the results of their survey for these counties as one entity.
- Kids Count in Michigan.
- State of Michigan Labor and Education Departments.
- State of Michigan, Department of Vital Statistics.

The Branch-Hillsdale-St. Joseph Community Health Agency (BHSJ CHA) was instrumental in providing reliable secondary data.

Presentation of Data

The primary and secondary data were incorporated into a PowerPoint presentation that was shown at a meeting of the full membership of the HSN on April 19, 2016. The presentation can be found in Appendix B of this report.

After the presentation, network members were asked to identify what they considered the important health issues facing the community and how these needs might best be met.

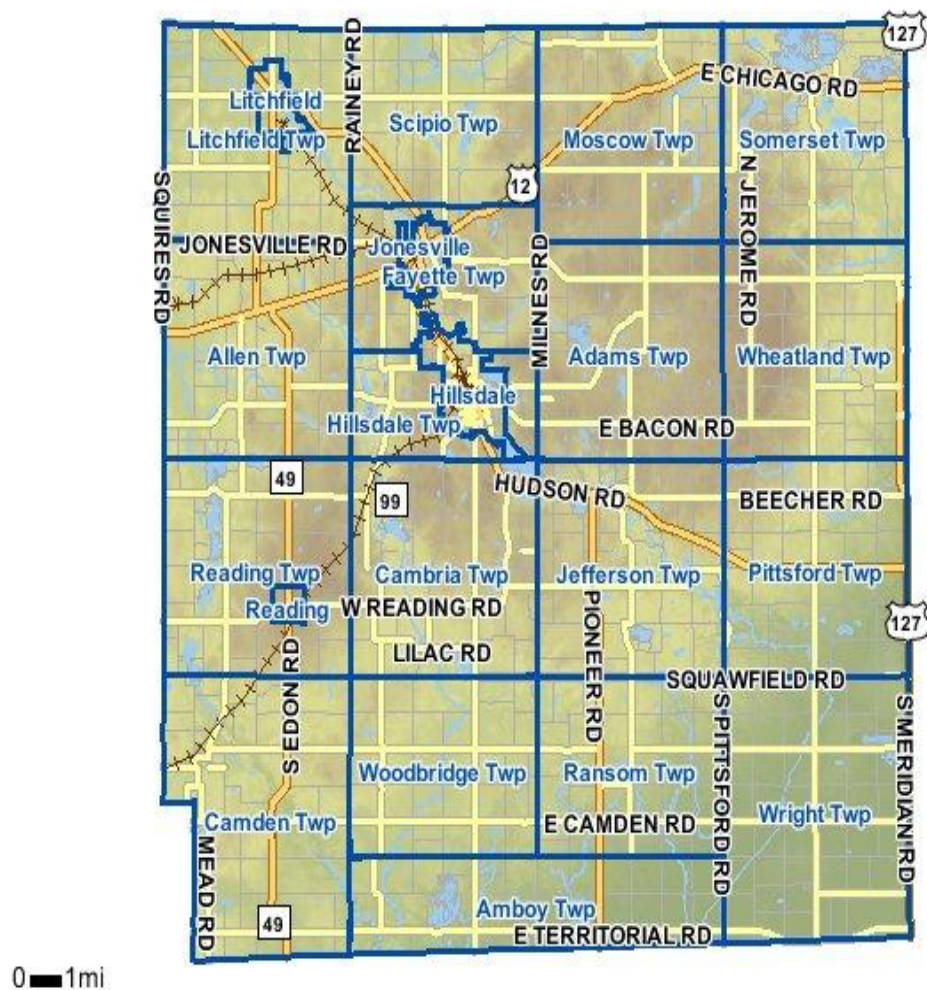
Their suggestions were incorporated into this report and presented to the Hillsdale Hospital board of directors to create a strategic plan.

This report includes a summary of those findings.

COMMUNITY PROFILE

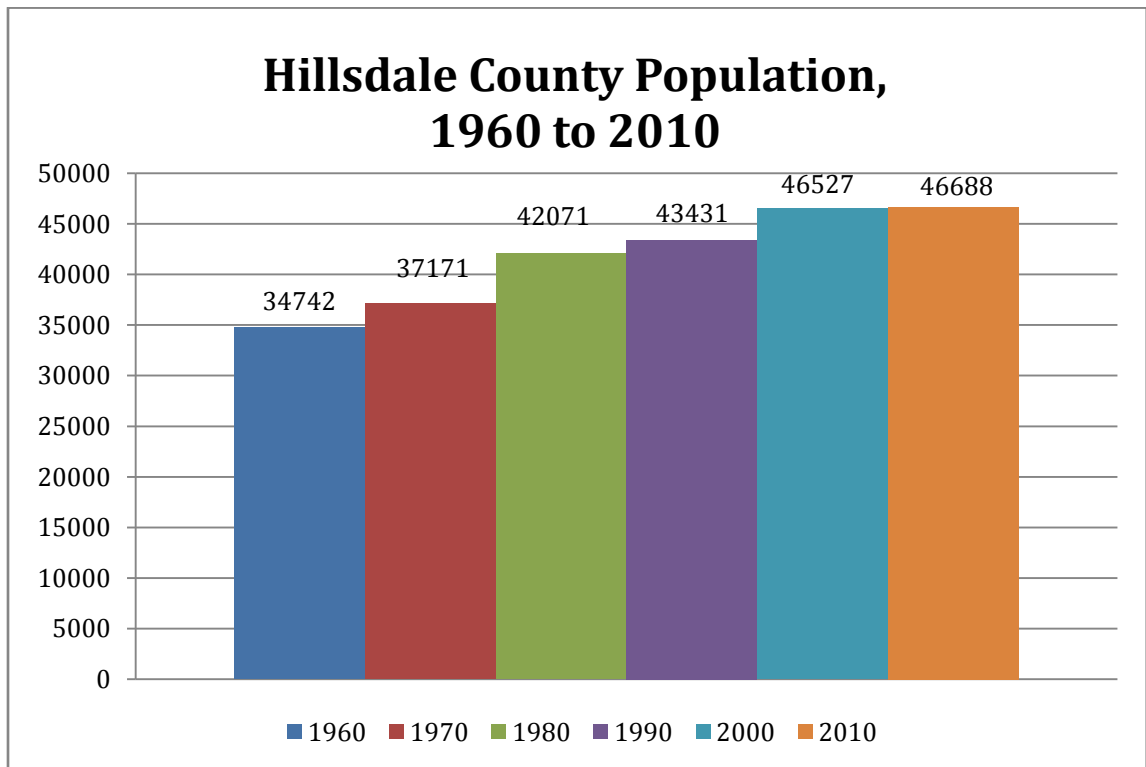
Hillsdale Hospital primarily serves the residents of Hillsdale County.

Hillsdale County is located in south-central Michigan and covers a land area of approximately 598 square miles. It is a rural community with a population density of 78 residents per square mile, compared to an average of 175 in Michigan, according to the 2014 U.S. Census estimates.



Population Trends

The estimated 2014 population of Hillsdale County was 45,830, a slight decrease of 1.8% from the 2010 population of 46,688. Overall, the county population has remained relatively stable over the last two decades.



Source: U.S. Census Bureau, 1960 to 2010

Of the 1,110 respondents to the survey, 95 said they were not county residents. The remaining respondents (1,015 people) represent about 2.2% of the county population according to 2014 Census estimates.

Racial and Ethnic Data

Census data of county by race reveals the respondents are primarily white.

Population of Hillsdale County by Race Compared to Michigan		
	Hillsdale	Michigan
White	97.1%	79.9%
African American	0.7%	14.2%
American Indian/Alaska Native	0.5%	0.7%
Asian	0.4%	2.9%
Some Other Race	1.3%	2.3%

Source: U.S. Census Bureau, 2014 Estimates

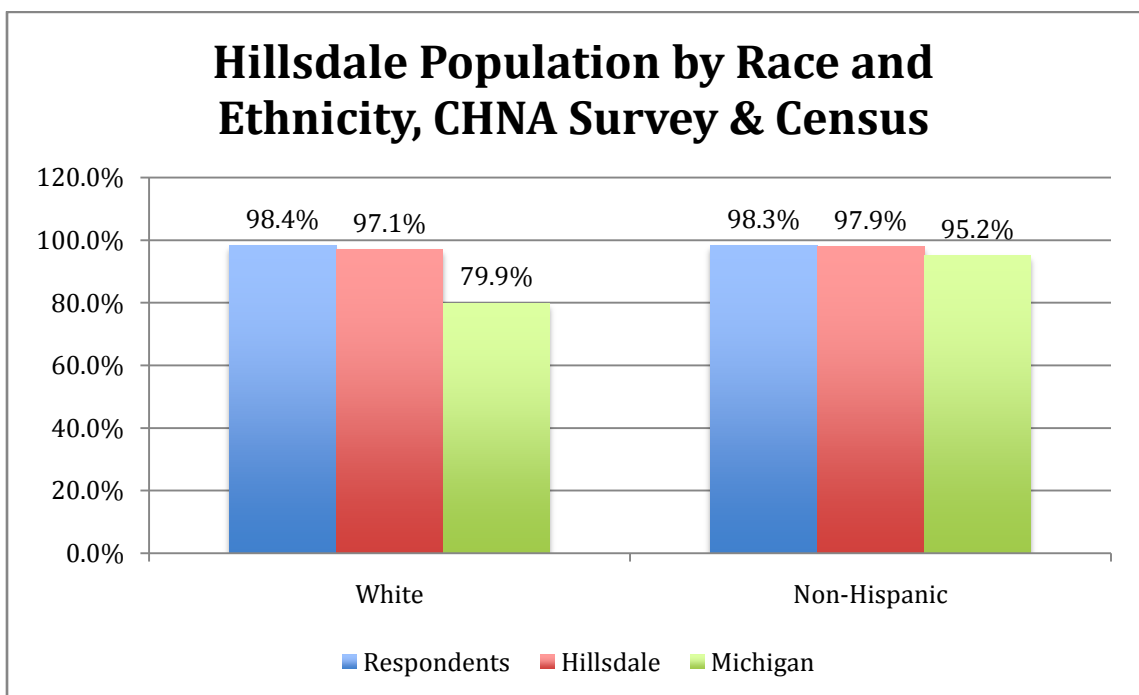
County census data shows a small percentage of residents are Hispanic.

Percentage of Hispanic Hillsdale County Residents Compared to Michigan		
	Hillsdale	Michigan
Hispanic	2.1%	4.8%

Source: U.S. Census Bureau, 2014 Estimates

The racial and ethnic profile of the survey respondents who answered this question mirrored this data:

- 98.4% of the respondents were white.
- 1.7% respondents identified themselves as Hispanic.



Source: CHNA Survey, 2016 and U.S. Census, 2014 Estimates

Population by Sex

The 2014 population estimate for Hillsdale County indicates the county is 50.1% female and 49.9% male.

740 (or 69%) of the 2016 CHNA survey respondents said they were female; 332 (or 31%) were male. This is a more balanced sex ratio than the 2013 survey when 75% of the respondents said they were female.

Population by Age

The median age of Hillsdale residents is 40.5 years compared to Michigan's 38.9 years and 36.8 years for the United States as a whole.

Median Age of Residents of Hillsdale County, Michigan and the U. S.			
	Hillsdale	Michigan	United States
Median Age	40.5	38.9	36.8

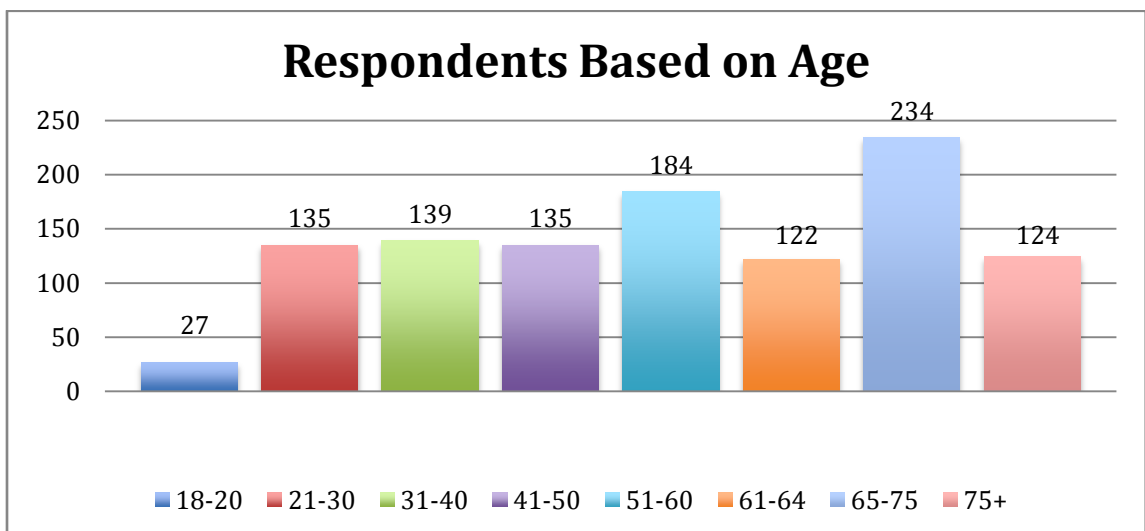
Source: U.S. Census Bureau, 2010

Hillsdale County has a higher proportion of residents age 65 and over than Michigan.

Percentage of Hillsdale County Population by Age Compared to Michigan		
	Hillsdale	Michigan
Age 0 to 18	22.3%	22.4%
Age 18 to 65	60.0%	62.2%
Age 65+	17.7%	15.4%

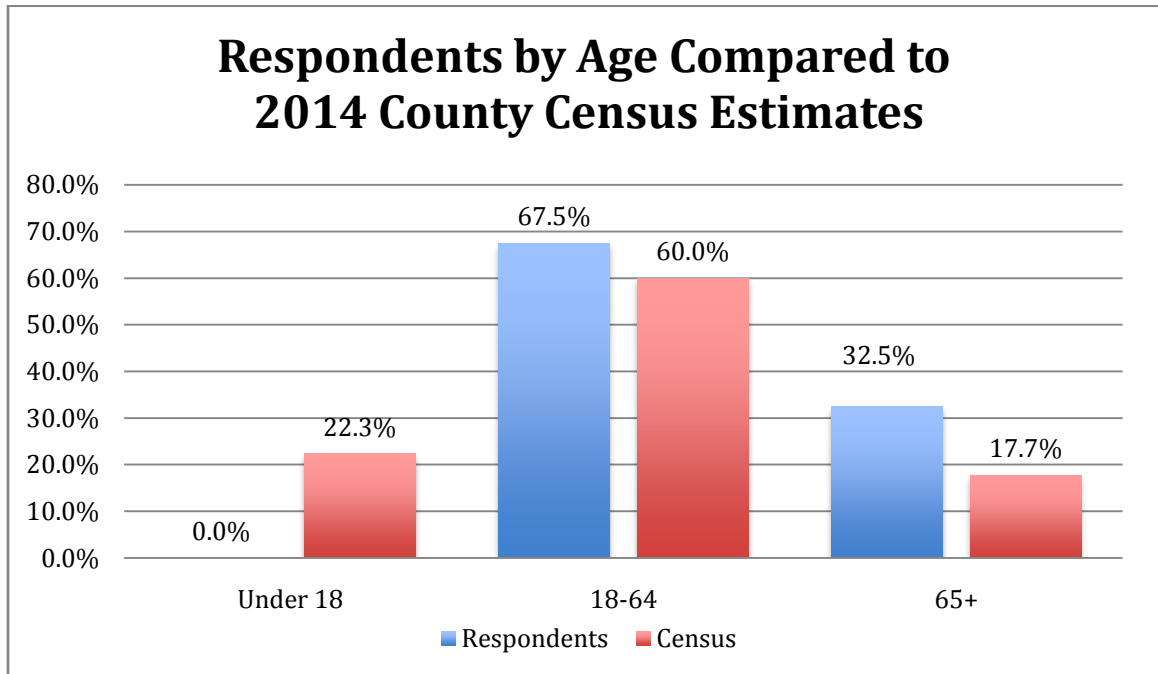
Source: U.S. Census Bureau, 2014 Estimates

The respondents to 2016 CHNA survey were age 18 and older.



Source: CHNA Survey, 2016

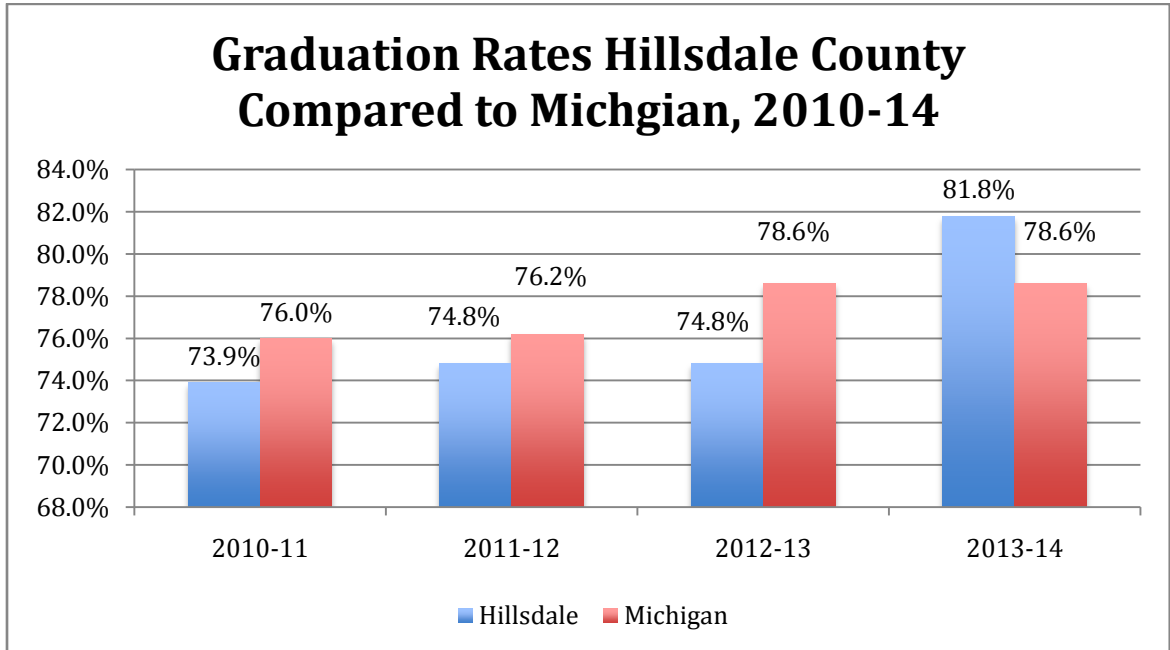
The CHNA survey had a higher percentage of respondents that were 65 or older than the general population: 358 (or 32.5%) of respondents identified themselves as in this age group. This is comparable to the 2013 CHNA survey when 32% of the respondents were in this age group.



Source: CHNA Survey, 2016 and U.S. Census Bureau 2014 Estimates

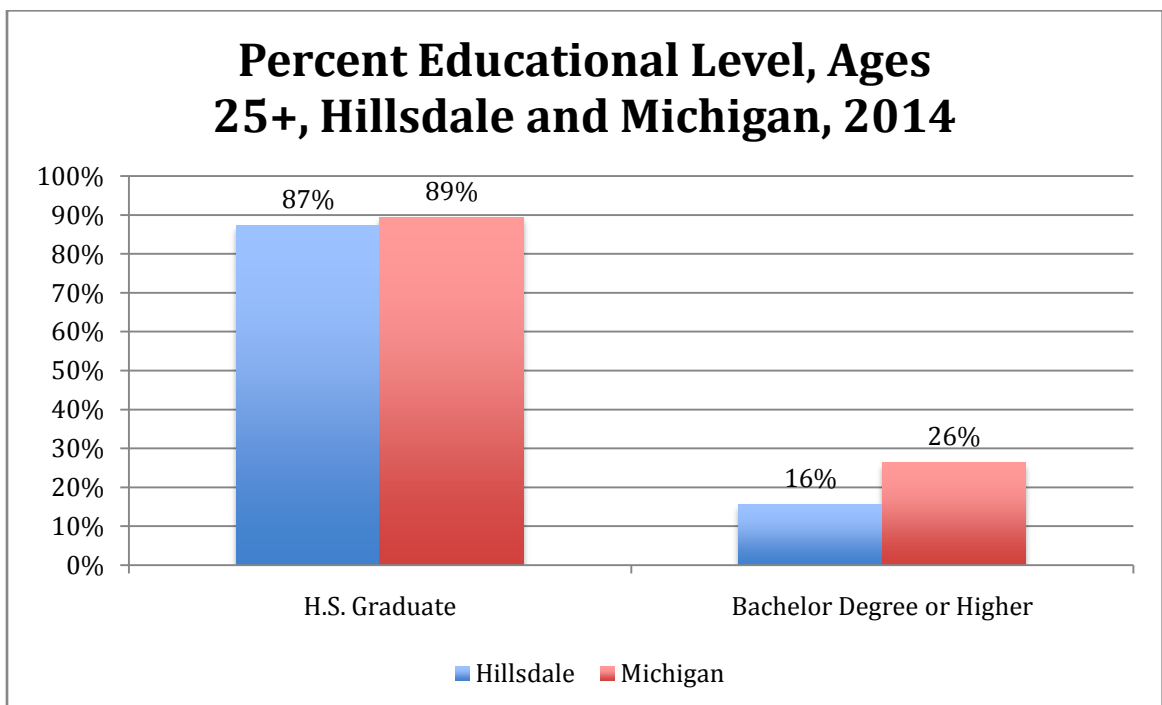
Population by Educational Level

Hillsdale County had a slightly higher school graduation rate than Michigan in the 2013-2014 school year. This was higher than in past years.



Source: Center for Educational Performance and Information, HDE.

The percentage of adults, ages 25 and older, with a high school diploma is slightly lower in Hillsdale County than in Michigan, and fewer county residents have degrees beyond high school.

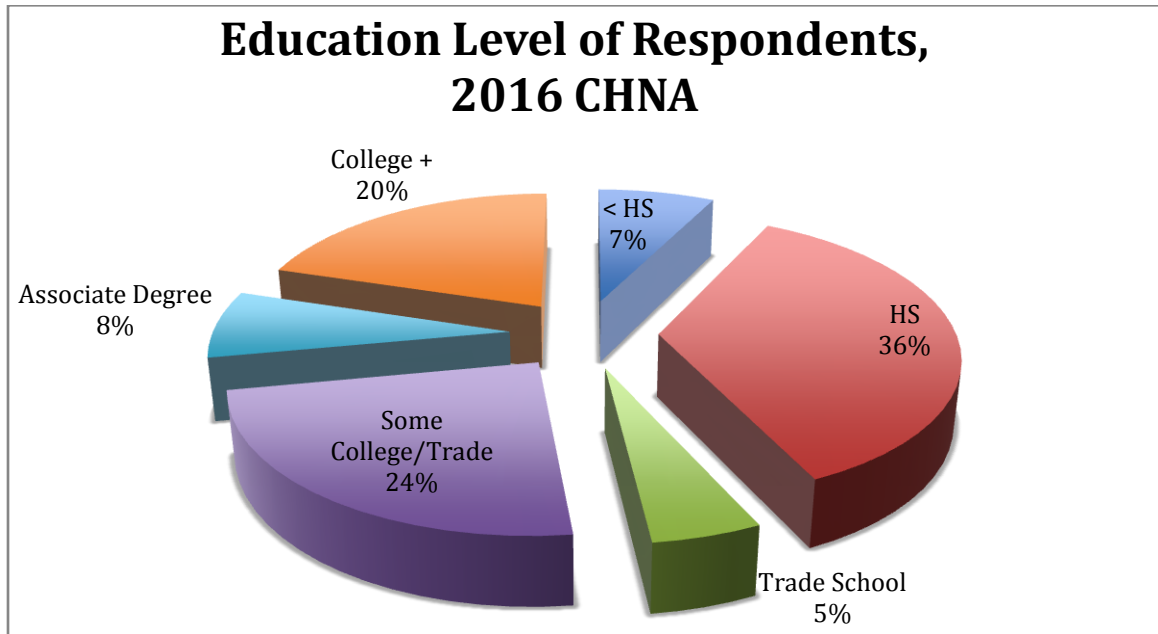


Source: U.S. Census Bureau, 2014 Estimates

The 2016CHNA survey asked respondents about their educational status.

The results indicate that 93% of the 1,048 respondents who answered this question had at least a high school diploma and 20% had a college degree or higher level of education.

In the 2013 survey, 90% of respondents were high school graduates and 23% had a college or higher degree.



Source: CHNA Survey, 2016

Based on the education data available, the respondents to both the 2013 and 2016 CHNA surveys were better educated than the general population.

There was a higher percentage of individuals with college or advanced degrees among the respondents to the 2016 survey than in the general Hillsdale County population, but less than the percentage in Michigan.

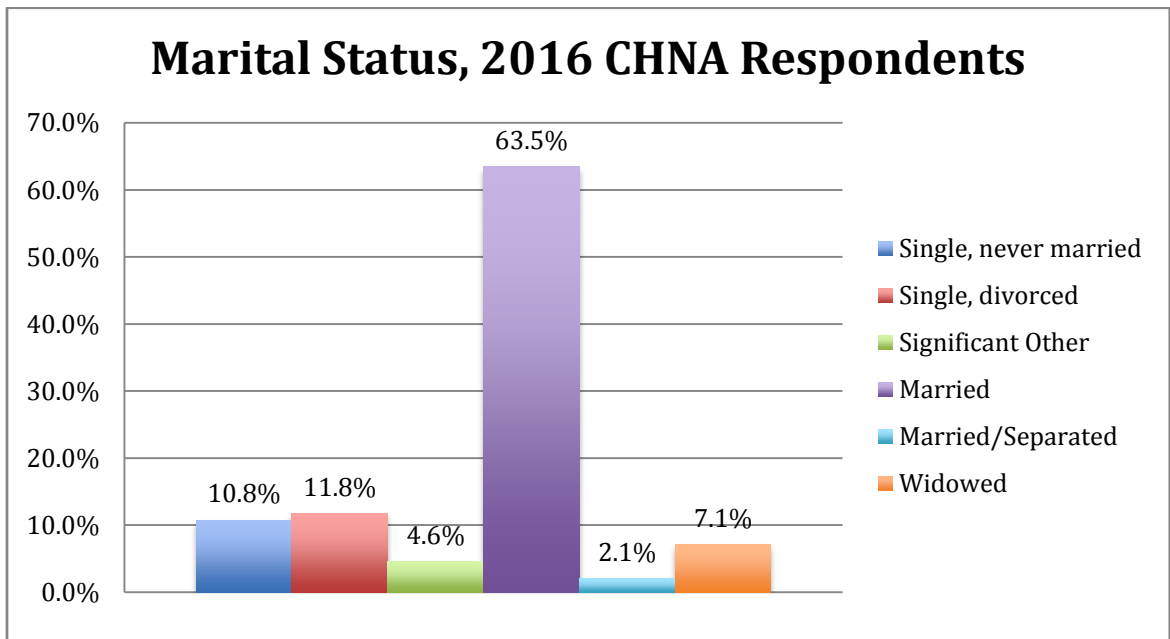
Many of those with college or advanced degrees are associated with Hillsdale College, an independent four-year liberal arts college with a national reputation. These residents have a significant impact on the social and economic life of the local community.

The members of the Human Services Network (HSN) felt that the education levels of respondents to the survey did not accurately reflect the county population. They were concerned about the high percentage of undereducated in the county and identified it as the major reason some residents live in poverty.

Population by Marital Status

Respondents to the 2016 CHNA were asked to describe their marital status. Of the 1,056 who answered this question:

- 114 (or 10.8%) were single, never married.
- 125 (or 11.8%) were single, divorced.
- 49 (or 4.6%) were living with a significant other.
- 671 (or 63.5%) were married.
- 22 (or 2.1%) were married but separated.
- 75 (or 7.1%) were widowed.



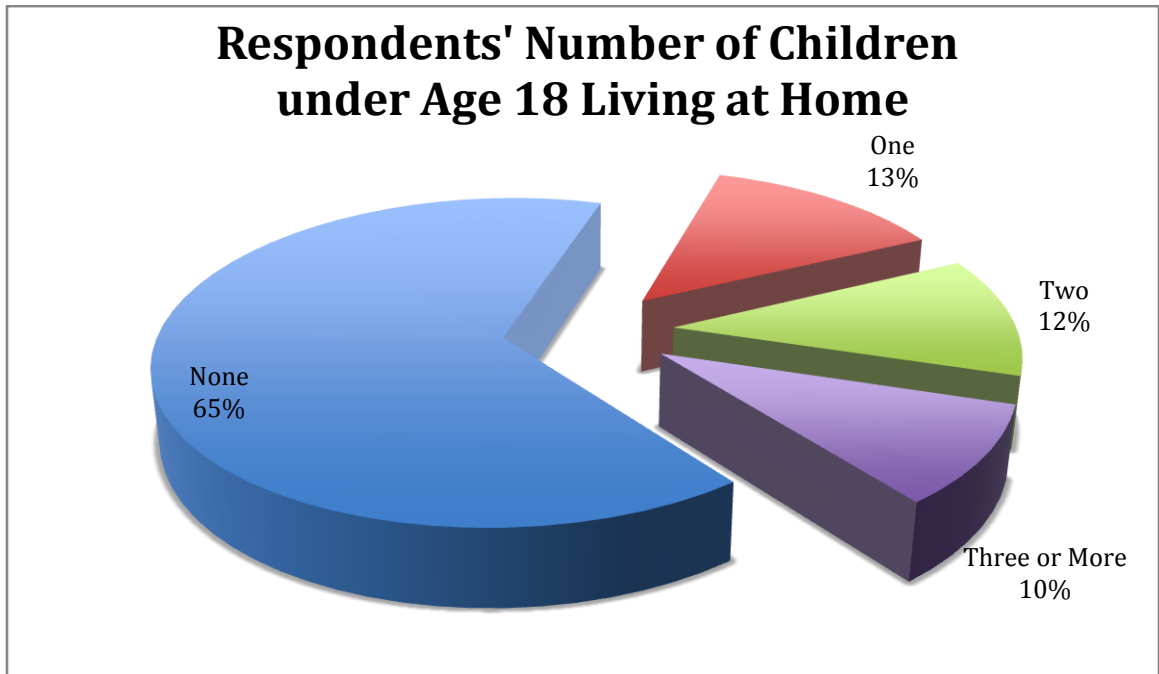
Source: CHNA Survey, 2016

The 2013 CHNA survey had found 59.4% were respondents were married.

The HSN members commented that there are many unwed mothers in the community. It was conjectured that many choose to remain unmarried because of existing economic incentives.

Children Living at Home

Respondents were asked how many children under the age of 18 were living in their home. The majority (65.2%) of the 1,044 people who answered this question had no children at home. This finding may reflect the fact that a large number of the survey respondents were 65 and older.



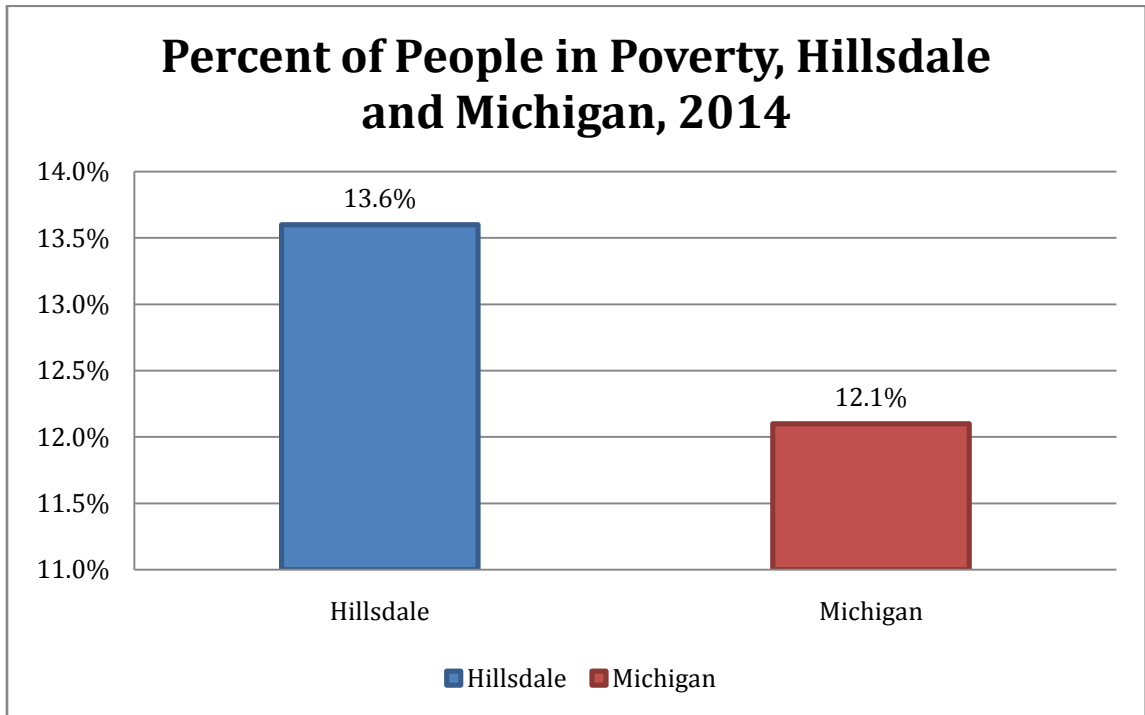
Source: CHNA Survey, 2016

Population by Poverty Level

Hillsdale County has a large number of people living at or near poverty level, and the number is growing.

Poverty in the U.S. was defined in 2010 as a family of four with an annual income of \$22,050. In 2014, the income was raised to \$24,230.

Hillsdale County had more people in poverty in 2014 than Michigan.



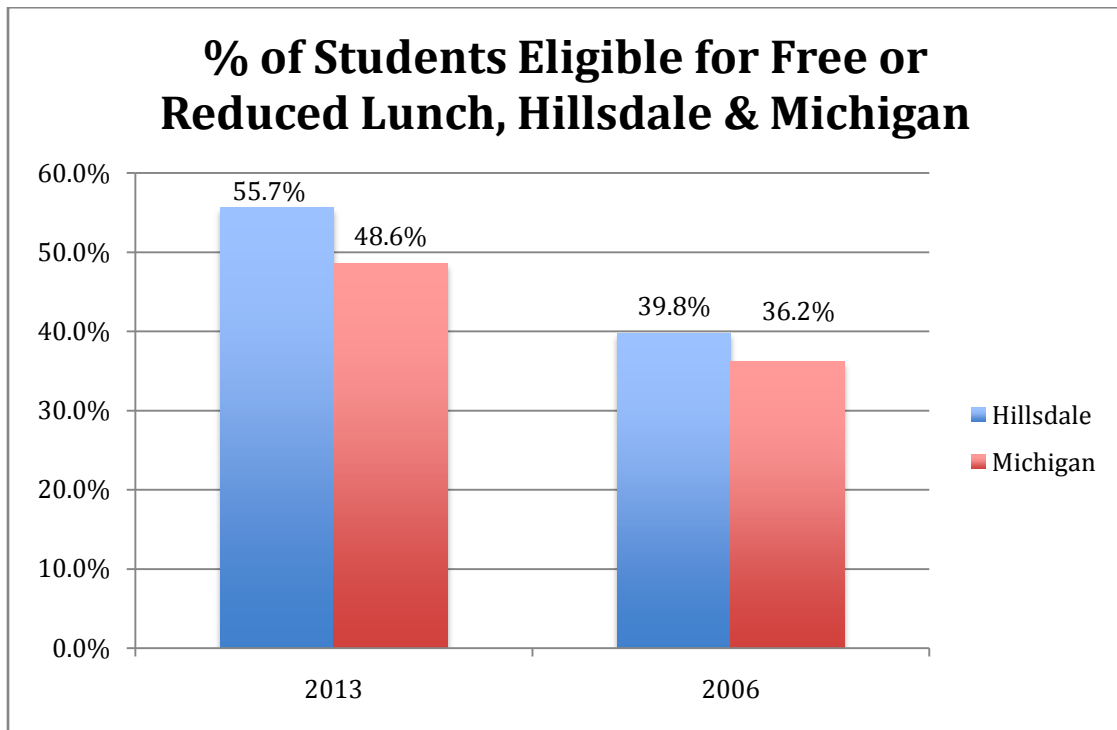
Source: U.S. Census Bureau, 2014 American Community Survey Estimate

The median household and per capita income for residents in Hillsdale County is less than Michigan, 2010-2014 average.

Median and Per Capita Income, Hillsdale and Michigan, 2010-14 Average		
	Hillsdale	Michigan
Median Income	\$42,183	\$49,087
Per Capita Income	\$20,888	\$26.143

Source: U.S. Census Bureau, 2014 Estimates

The percentage of Hillsdale students eligible for the free or reduced lunch program increased from 39.8% in 2006 to 55.7% in 2013. This is significantly higher than the percentage for all Michigan students.



Source: Kids Count in Michigan Data Profile 2016

Respondents to the CHNA survey were asked if they were very concerned, moderately concerned, or not at all concerned about poverty in the community. Of the 1,005 people who answered this question:

- 395 (or 39.3%) said they were very concerned.
- 451 (or 44.9%) were moderately concerned.
- 159 (or 15.8%) were not at all concerned.

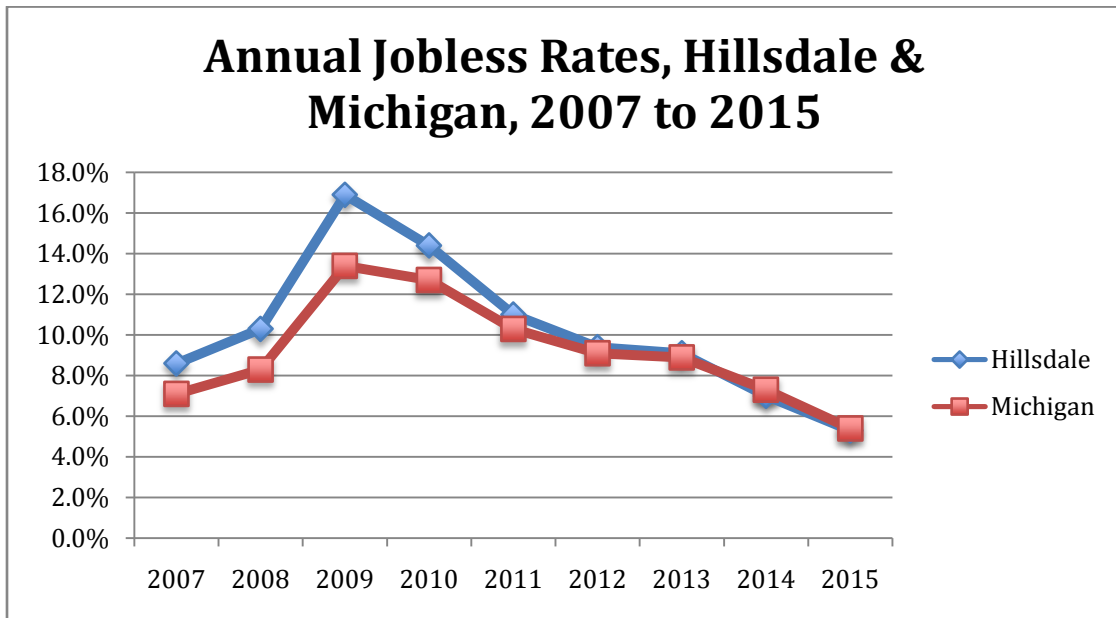
One indicator of poverty is the percentage of people who own their own home. The respondents to the CHNA survey were asked about their living situation. Of the 1,058 who answered this question:

- 785 (or 74.2%) lived in their own home.
- 192 (or 18.2%) rented a home or apartment.
- 80 (or 7.6%) stayed with relatives or others
- 1 (or .1%) said they were homeless.

The members of the HSN expressed concern over the status of the working poor in the community. In their collective experience, the stress experienced by low-income workers struggling to pay basic bills often leads to neglect of basic medical issues, affects their quality of life and impacts individual longevity.

Employment

Hillsdale County had a jobless rate of 5.3% in 2015, comparable to Michigan's 5.4%.



Source: Michigan Labor Market Information, 2012-15

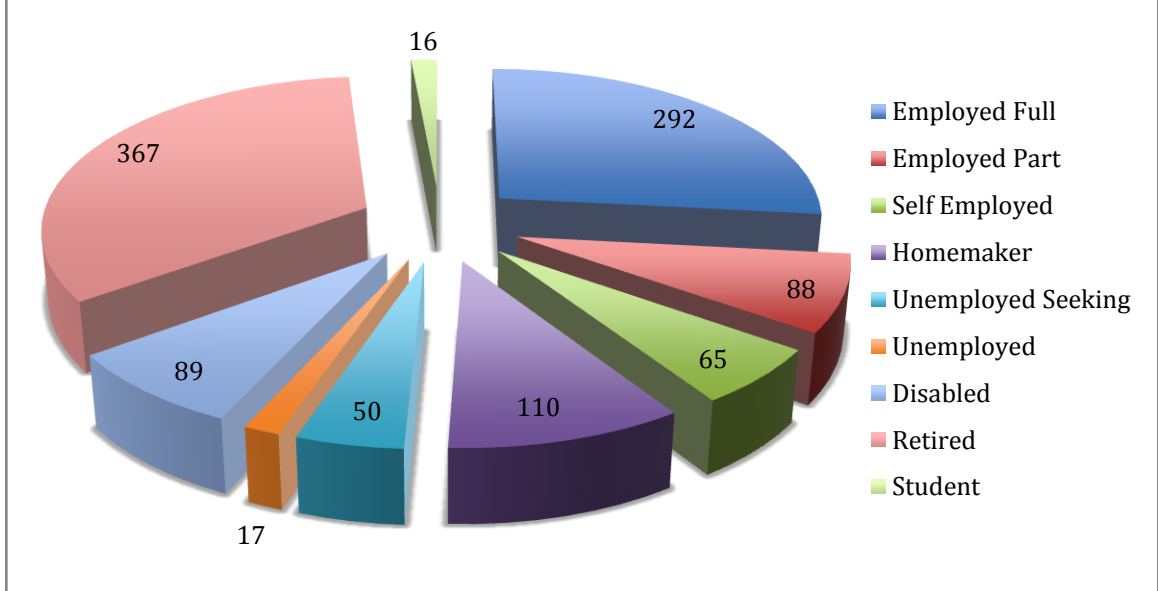
Employment ranked fourth among areas of concern identified by the 2016 CHNA survey respondents.

Respondents were asked on the CHNA survey about their employment status. Of the 1,094 who answered this question:

- 16 (or 1.5%) were students or too young to be employed.
- 292 (or 26.7%) were employed full time by a company.
- 88 (or 8.0%) worked part time or seasonally.
- 65 (5.9%) were self-employed.
- 50 (or 4.6%) were unemployed but seeking work.
- 17 (or 1.6%) were unemployed but not seeking work.
- 89 (or 8.1%) were permanently disabled.
- 367 (or 33.5%) were retired.
- 110 (or 10.1%) were homemakers.

The members of the Human Services Network (HSN) commented that the significant population of undereducated residents in the county impacts local employment opportunities. The lack of qualified applicants for professional positions in the community often results in hiring individuals from outside the county to fill vacancies. They recognized a need for more skilled labor training programs in the county.

Respondents' Employment Status, 2016



Source: CHNA Survey, 2016

Respondents were asked if they were very concerned, moderately concerned, or not at all concerned about the lack of employment opportunities in the community. Of the 996 who answered this question:

- 419 (or 42.1%) said they were very concerned.
- 376 (or 37.8%) were moderately concerned.
- 201 (or 20.2%) were not at all concerned.

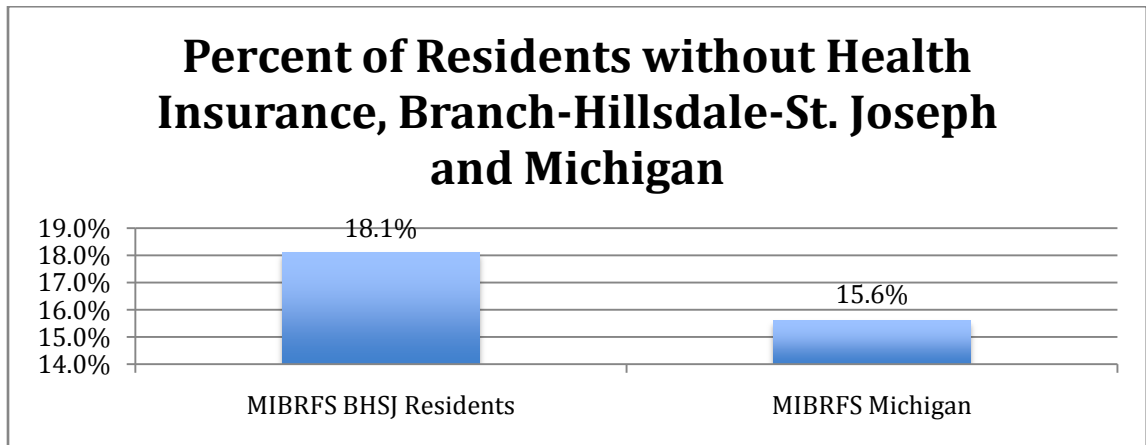
One of the fields where there is a growing need for trained personnel is medical services. Hillsdale Hospital actively partners with South Central Michigan Works to recruit and train medical professionals.

THE COMMUNITIY AND HEALTH INSURANCE

Prevalence of Health Insurance

Economic status was traditionally the most important factor determining whether a person had any, or adequate, health insurance.

The Michigan Behavior Risk Factor Survey, 2012 to 2014 average, showed 18.1% of residents in Branch-Hillsdale-St. Joseph Counties between the ages of 18 and 64 reported they had no health insurance. This is higher than 15.6% reported for Michigan residents.

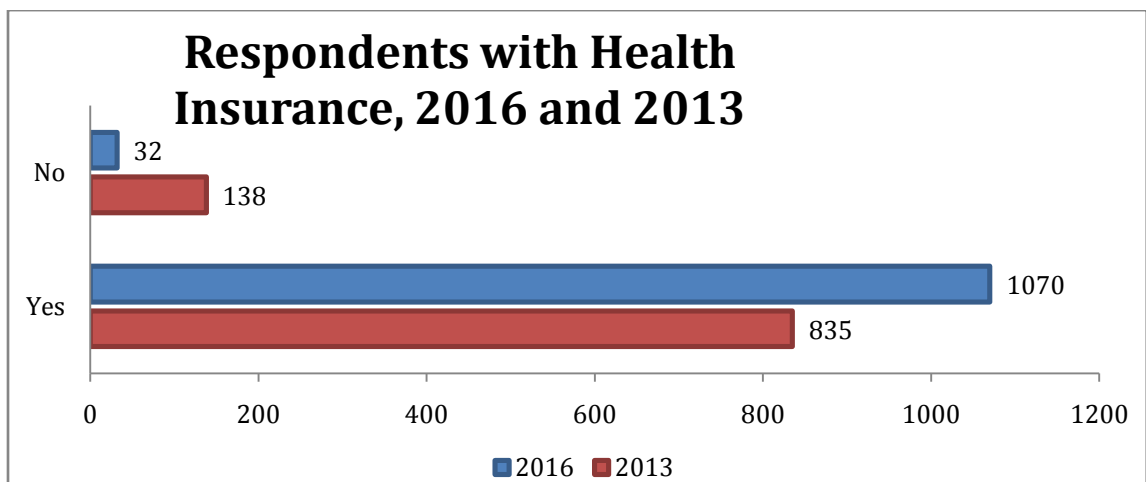


Sources: Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2012-14 Average

The CHNA survey asked whether respondents had health insurance. Of the 1,102 who responded to this question:

- 1,070 (or 97.1%) said they did.
- 32 (or 2.9%) said they did not.

The number of uninsured was much higher in the 2013 CHNA survey.

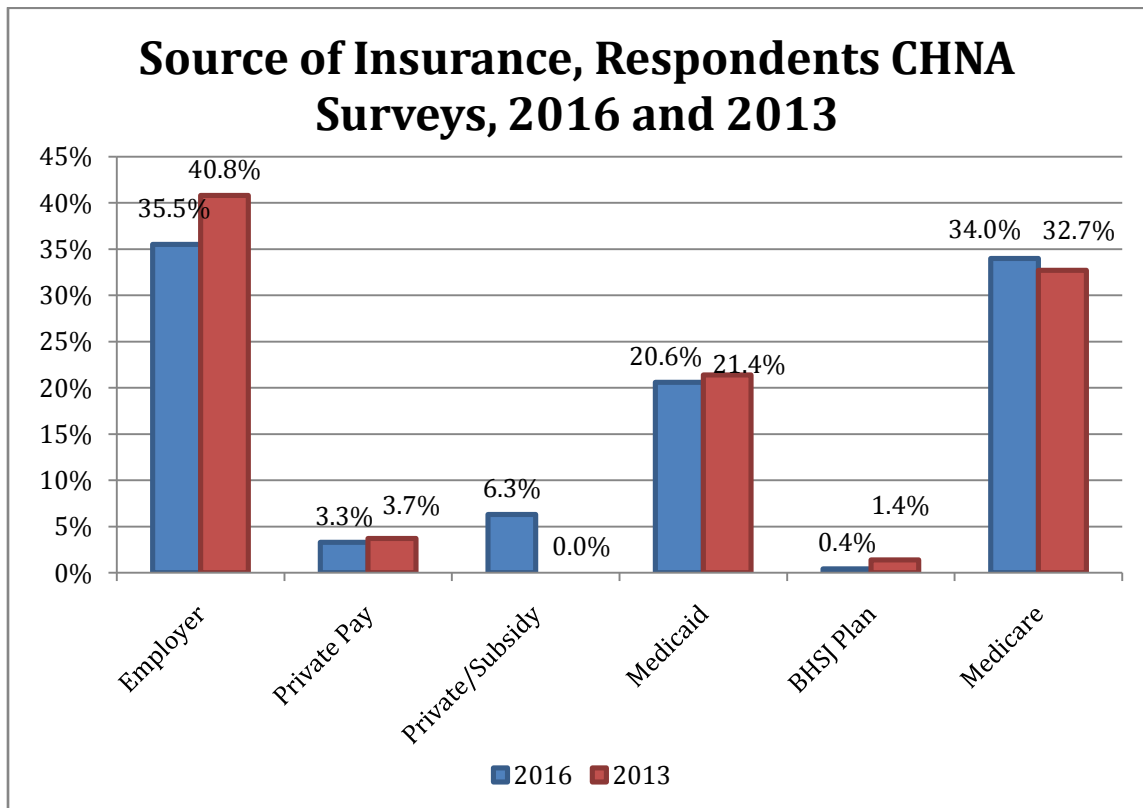


Source: CHNA Surveys, 2016 and 2013

Type of Insurance

Respondents were asked on the CHNA survey what type of health insurance they had. Of the 1,054 who answered this question:

- 374 (or 35.5%) had insurance through their employer.
- 35 (or 3.3%) had privately paid insurance where they paid all the cost.
- 66 (or 6.3%) had a private plan where they paid some of the cost (government subsidized.)
- 217 (or 20.6%) were on Medicaid.
- 4 (or 0.4%) used the Branch-Hillsdale-St. Joseph health plan.
- 358 (or 34.0%) were on Medicare.



Source: CHNA Surveys, 2016 and 2013

Under the Affordable Care Act, Medicaid expansion was approved December 30, 2013 in Michigan and implemented beginning April, 2014. This was expected to cause an increase in the number of Medicaid users in Hillsdale County. But the percentage of respondents to the 2016 survey who said they had Medicaid was 20.6%. This is comparable to the 21.4% reported in 2013.

The consequence of the Affordable Care Act on the CHNA respondents seems to be a decrease in the percentage that had employer coverage and a movement to private pay insurance with a government subsidy.

Medicaid

Approximately 20% of the respondents to the surveys in 2013 and 2016 were on Medicaid. But the survey was limited to residents ages 18 and older.

The HSN members said 43.7% of county children ages 0 to 18 are on Medicaid.

The HSN was very concerned that although there is a significant population of people on Medicaid only a few doctors in the area accept that as a form of payment. For example, there is only one area pediatrician that will take patients on Medicaid.

The HSN recognized physicians are reluctant to take Medicaid because the paperwork involved in serving Medicaid patients is substantial and the reimbursement for services is below that from other insurance plans.

The HSN suggested the hospital encourage area doctors to take Medicaid.

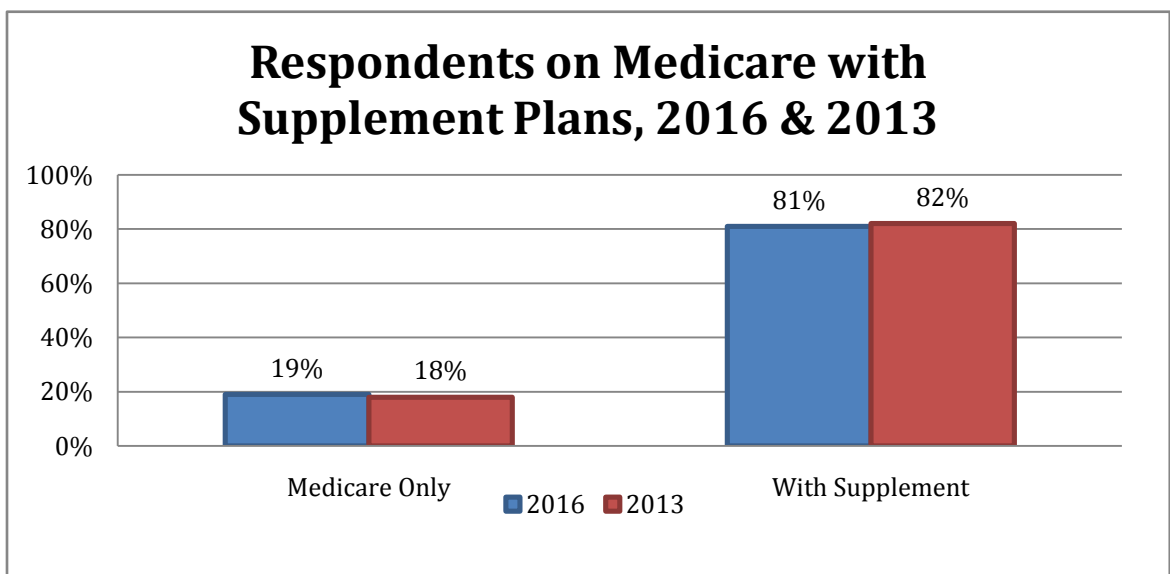
Many of the HSN members work in social service and related capacities. Based on their involvement with Medicaid recipients, many felt those covered under Medicaid were more likely to seek treatment in the emergency room of the hospital than a private physician. This is because emergency room services do not require a co-payment while going to a local provider does.

Medicare and Supplemental Plans

The majority of the 358 respondents who reported they were on Medicare in the 2016 CHNA survey had a supplemental plan:

- 291 (or 81%) said they carried a supplemental insurance plan.
- 67 (or 19%) said they did not.

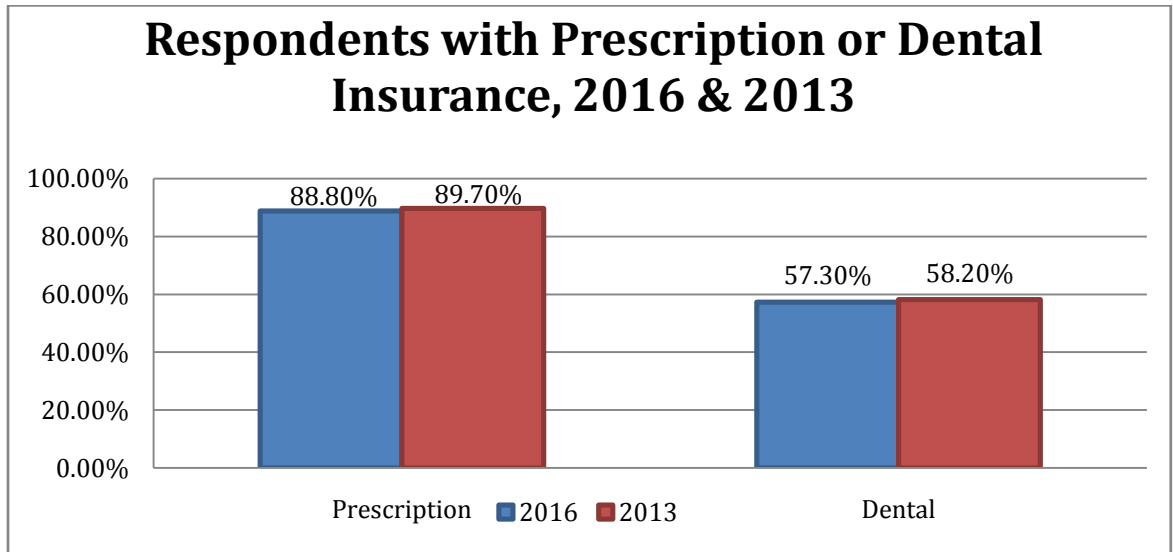
This is comparable to what was found on the 2013 CHNA survey.



Source: CHNA Surveys, 2016 and 2013

Prescription and Dental Insurance

Though 97.1% of those surveyed had some form of health insurance, a smaller percentage had prescription coverage and even less had dental insurance. This is similar to what was found in 2013.



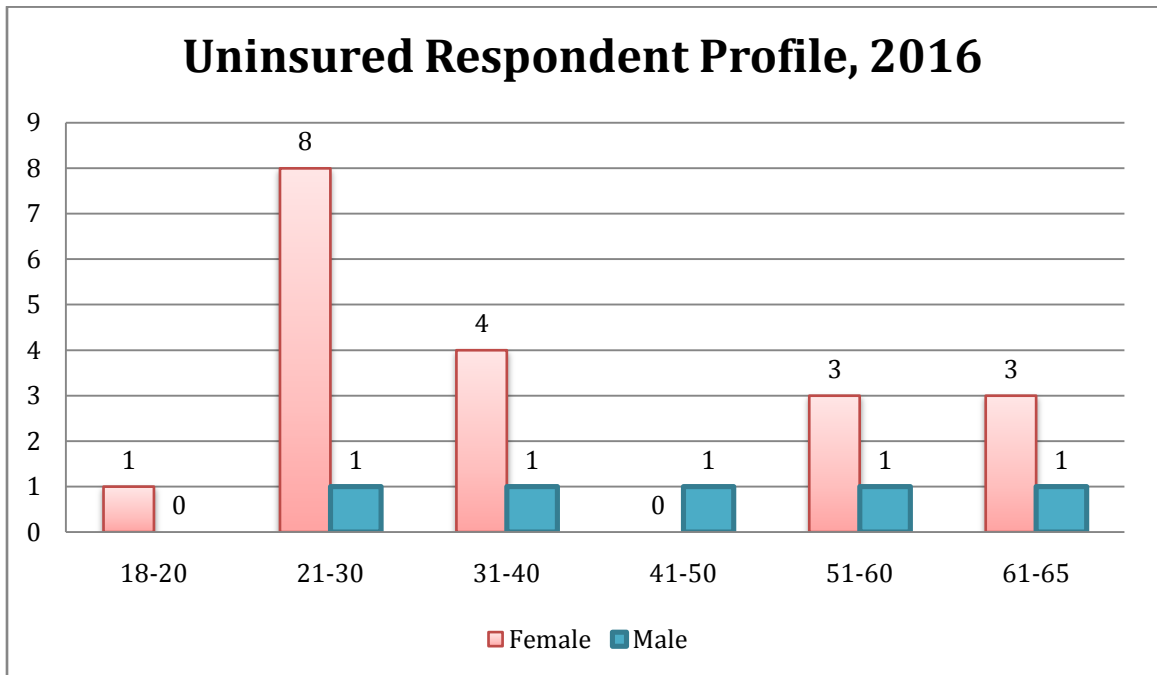
Source: CHNA Surveys, 2016 and 2013

The Uninsured

32 people on the 2016 CHNA survey said they did not have health insurance. When the individual responses were analyzed it was found:

- Five actually had Medicare
- One was on Medicaid
- Two had a private or employer plan.

A profile of the 24 people with no evidence of insurance was constructed to better understand their individual situations. The respondents with no insurance were more likely to female (19) than male (5).



Source: CHNA Survey, 2016

Patient Insurance Profile, Hillsdale Hospital

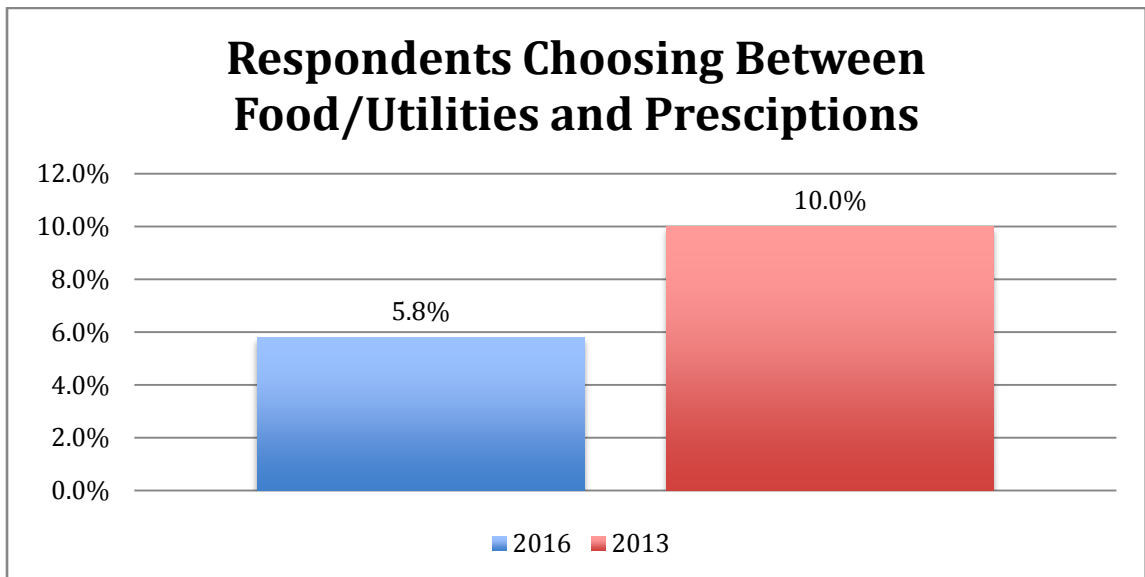
A study of Hillsdale Hospital inpatient admissions revealed the majority of patients were covered by Medicare.

Payment Source, Hospital Inpatients, Hillsdale Hospital			
	2013	2014	2015
Medicare	61%	58%	59%
Medicaid	14%	18%	17%
BC/BS	14%	13%	15%
Commercial	7%	7%	8%
Self Pay	4%	4%	2%

Source: Inpatient Insurance Profile, Hillsdale Hospital, 2013 to 2015

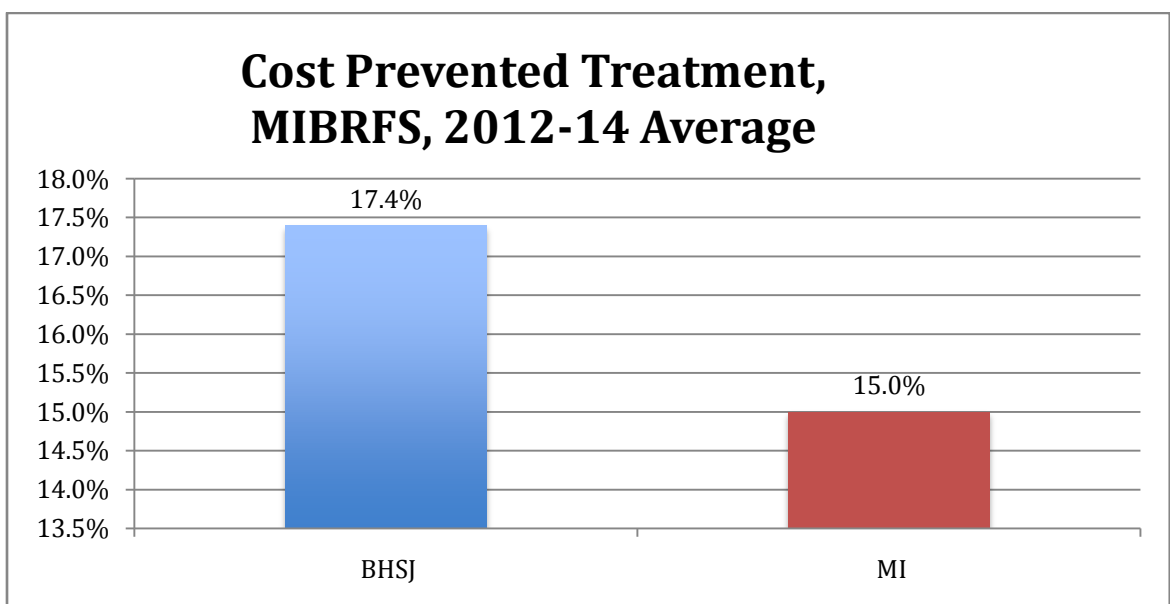
Costs Prohibiting Factor

Respondents were asked on the CHNA survey if they ever had to choose between food/utilities or prescriptions due to cost. Of the 943 who answered this question, 55 (or 5.8%) said they had. This is a decrease from the 2013 survey when 10% of respondents had said cost was a factor.



Source: CHNA Survey, 2016 and 2013

The Michigan Behavior Risk Factor Survey asked respondents if cost of medical care prevented them from seeking treatment. That survey found 17.4% of Branch-Hillsdale-St. Joseph residents reported that cost was a factor, compared to only 15.0% of Michigan residents.



Sources: Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2012-2014 Average

The members of the HSN felt that the population most likely to say they had to choose between food/utilities and prescriptions (or medical care in general) would be the working poor.

Affordable health care was the fifth most important issue for the 2016 CHNA survey respondents; it was the most important issue on the 2013 CHNA survey.

Respondents were asked if they were very concerned, moderately concerned, or not at all concerned about the affordability of health care in the community. Of the 998 who answered this question:

- 428(or 42.9%) were very concerned.
- 346 (or 34.7%) were moderately concerned.
- 224(or 22.4%) were not at all concerned.

BIRTH AND DEATH COMMUNITY HEALTH INDICATORS

Birth Statistics

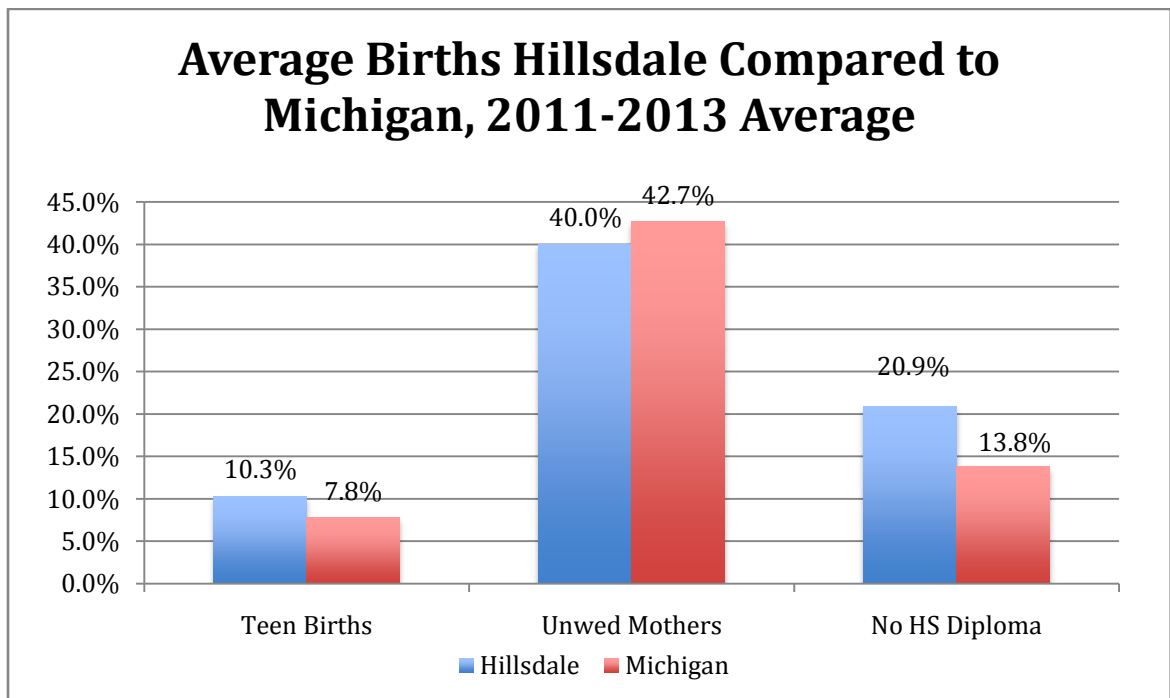
Hillsdale County's average fertility and live birth rates for women age 15 and older during the years 2011 to 2013 were higher than Michigan, but the average pregnancy and abortion rates were lower.

Pregnancy and Live Birth Rates, Hillsdale and Michigan, 2011-13 Averages		
	Hillsdale	Michigan
Fertility Rate	66.1	59.8
Live Birth Rate	55.7	50.5
Pregnancy Rate	70.6	72.2
Abortion Rate	4.0	12.4

Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2011-2013 Average

There was an average of 542 live births a year from 2011 to 2013 among county residents. During this time period:

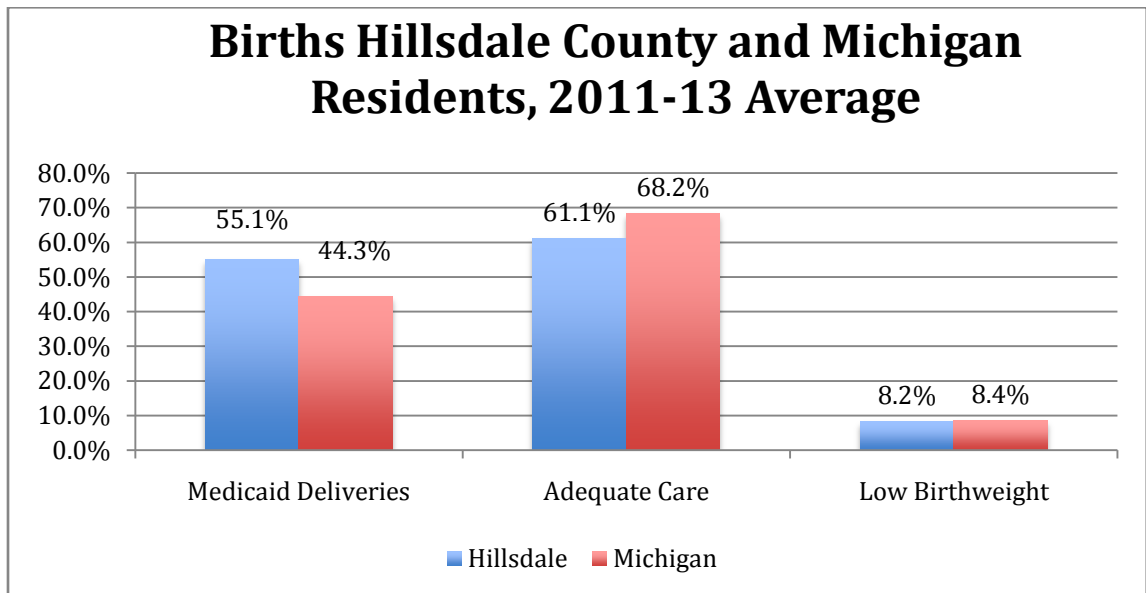
- 10.3% (or 56) of the births were to teen mothers compared to 7.8% in Michigan.
- 40.0% (or 217) were to unwed mothers compared to 42.7% in Michigan.
- 20.9% (or 113) of mothers had less than a high school education, compared to 13.8% in Michigan.



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2011-2013 Average

Among the 542 average births to county residents 2011 to 2013:

- 55.1% (or 299) of deliveries were covered by Medicaid compared to 44.3% in Michigan.
- 61.1% (or 331) of the mothers received adequate prenatal care compared to 68.2% in Michigan.
- 8.2% (or 44) of the babies were low birth weight compared to 8.4% in Michigan.



Source: Michigan Resident Birth Files, Michigan Department of Community Health, 2011-2013 Average

Hillsdale Hospital Birthing Center

Hillsdale Hospital offers a fully equipped birthing center. The hospital averaged 337 live births during the period 2012 to 2015.

Not all live births to Hillsdale County residents occurred at Hillsdale Hospital but some out-of-county residents used the hospital facility.

Hillsdale Hospital Births, 2012 to 2015				
	2012	2013	2014	2015
Births	308	353	368	319

Source: Hillsdale Hospital Live Births, 2012 to 2015

Respondents were asked if they were very concerned, moderately concerned, or not at all concerned about the teen pregnancy in the community. Of the 998 who answered this question:

- 315 (or 31.6%) were very concerned.
- 450 (or 45.1%) were moderately concerned.
- 233 (or 23.4%) were not at all concerned.

Birth Statistics Concerns

The members of the HSN were concerned about the high incidence of smoking among pregnant women and inadequate pre-natal care for some area mothers.

There were two recent deaths in the community due to extreme prematurity but it was unknown whether this had any connection to lack of prenatal care.

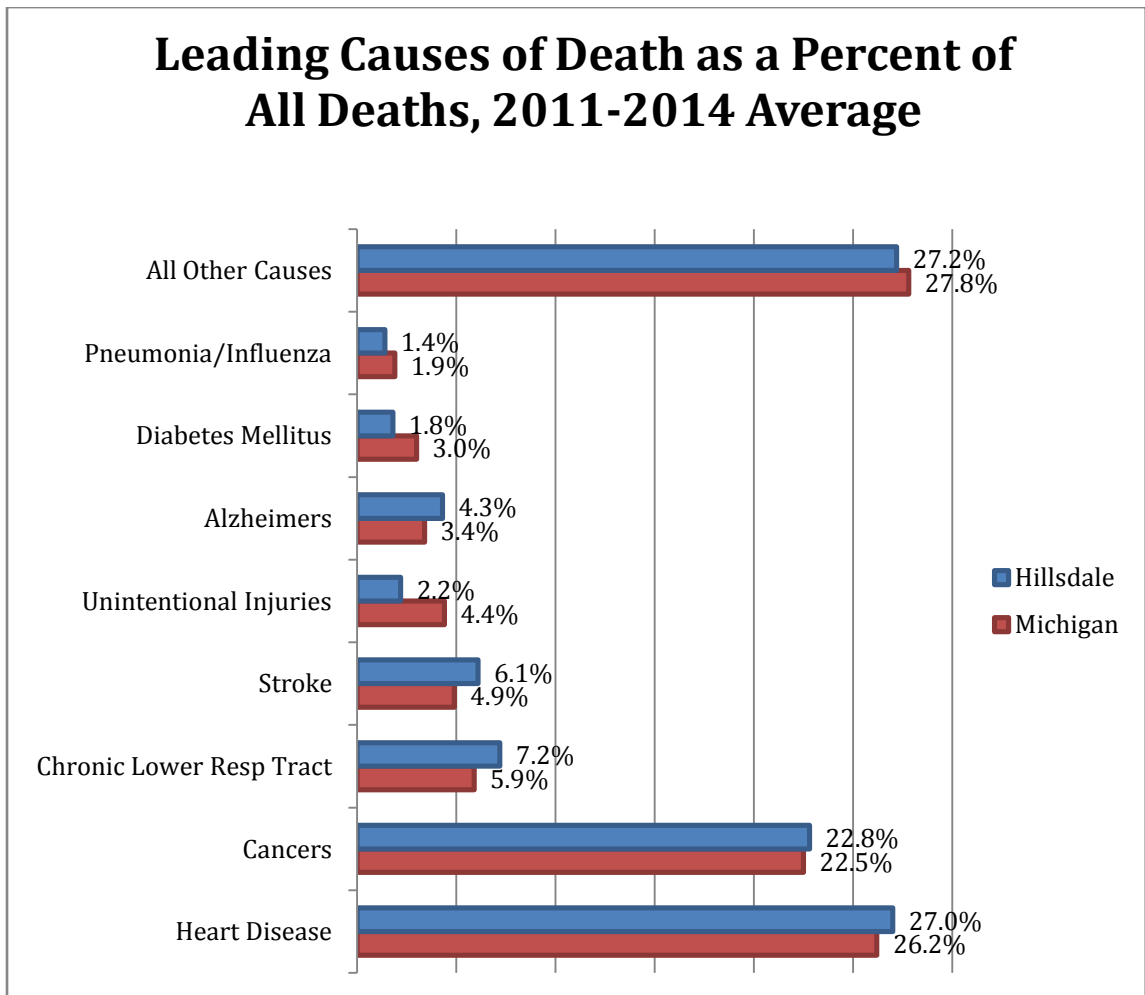
Three recent infant deaths in the community were due to unsafe infant sleep practices. Educating mothers about safe sleep practices should be routine and can perhaps be addressed by the hospital staff prior to the release of newborns.

The county currently has no Title X program. Title X is a federally funded family planning and related preventive health program for low-income or uninsured individuals. Some residents are referred by HSN members to agencies outside the area for pregnancy prevention services.

In addition, the HSN noted there is a shortage of qualified OB/GYN doctors in the county. Due to financial constraints, county private physicians must limit the number of Medicaid patients they can serve. Since the cost of more than half of county births is paid through Medicaid, the availability of affordable prenatal and obstetrical care for these mothers is a serious community issue.

Causes of Death

The leading causes of death in Hillsdale County were heart disease and cancer, at slightly higher percentages compared to Michigan.



Source: Michigan Death Files, 2011 to 2014 Average

According to the Centers for Disease Control (CDC), the leading causes of death in the United States in decreasing order in 2013 were:

- Heart disease: 611,105
- Cancer: 584,881
- Chronic lower respiratory diseases: 149,205
- Accidents (unintentional injuries): 130,557
- Stroke (cerebrovascular diseases): 128,978
- Alzheimer's disease: 84,767
- Diabetes: 75,578
- Influenza and Pneumonia: 56,979
- Nephritis, nephrotic syndrome, and nephrosis: 47,112
- Intentional self-harm (suicide): 41,149

AVAILABILITY OF HEALTH CARE IN HILLSDALE COUNTY

Health Resources and Services Administration Designations

The Health Resources and Services Administration (HRSA) determines if there is a Health Professional Shortage Area (HPSA) based on population, area geography, facilities available and other criteria.

Hillsdale County has several HPSA designations.

Shortage Area Designation	Type
Health Professional Shortage Area- Primary Care Rural Health Clinics	Entire County Hillsdale Medical Associates Primary Care Associates of Jonesville Reading Health Clinic
Health Professional Shortage Area- Mental Health	Coldwater-Hillsdale Service Area- Geographic Primary Care Associates of Jonesville Reading Health Clinic
Health Professional Shortage Area- Dental Care	Medicaid Population, Hillsdale Primary Care Associates of Jonesville Reading Health Clinic
Medically Underserved Area/Population	Service Area-County

Source: Health Resources and Service Administration, 2016

Area Clinics

Hillsdale County has three rural health clinics:

1. Hillsdale Medical Associates, 1456 Hudson Road, Hillsdale, MI 49242. This clinic operates Monday through Friday, 8 AM to 5 PM and accepts most types of insurance.
2. Primary Care Associates of Jonesville, 100 E. Chicago St., Jonesville, MI 49250. This clinic operates 9 AM to 7 PM Monday, 9 AM to 5 PM Tuesday through Friday, and Saturday 9 AM to 1 PM and accepts most types of insurance.
3. Reading Health Clinic, 143 South Main Street, Reading, MI 49274. This clinic operates Monday through Friday, 9 AM to 5 PM, and accepts most types of insurance.

Federally Qualified Health Center

The county is served by one Federally Qualified Health Center (FQHC): the Center for Family Health. The center is located at 240 W. Carleton Road, Hillsdale, MI 49242.

The center is considered a primary care facility and offers same day, scheduled, appointments with two nurse practitioners. It also makes appointments with doctors associated with the center.

The center accepts Medicaid and has a sliding fee for the uninsured or those with other health plans. No one is turned away because of inability to pay.

Free Health Clinic

There is one free health clinic, St. Peter's, open only two nights a week. The hospital donates lab services and medical supplies in support of this clinic. Many hospital staff members also donate their time to serve clinic clients.

Primary Care and Walk-in Clinic

The Hillsdale Health and Wellness Office at 12 E. Bacon, Hillsdale, MI, 49242, is a primary care family practice with a walk-in clinic. Private appointments are scheduled 8 AM to noon; the walk-in clinic is open seven days a week, 12 AM to 8 PM. The office accepts most insurances but limited Medicaid.

Dental Clinic

In March 2011, the Branch-Hillsdale-St. Joseph Community Health Agency, in partnership with My Community Dental Centers, opened a dental clinic in Hillsdale. The clinic, Michigan Dental, is located at 20 Care Drive, Hillsdale, MI 49242. The clinic serves Medicaid, the under-insured, and uninsured clients and is open Monday through Friday, 8 AM to 4:30 PM.

The members of the HSN commented that dental care in the community has improved since the establishment of this dental clinic in the area.

Medical Database

A full database of all facilities and medical personnel in the area has been compiled and is maintained by the Branch-Hillsdale-St. Joseph Community Health Agency. The Hillsdale County list can be found in Appendix C of this report.

Need for Urgent Care Facility

The HSN noted that the presence of the Family Center and Hillsdale Health and Wellness clinic have had a significant positive impact on the community.

But Hillsdale County currently has no round-the-clock urgent care facility. All health clinics have limited hours.

Misuse of Medical Care

HSN members stated, based on their experiences, that some residents seek medical treatment for simple matters that may not require professional services and many of them go to the hospital emergency room.

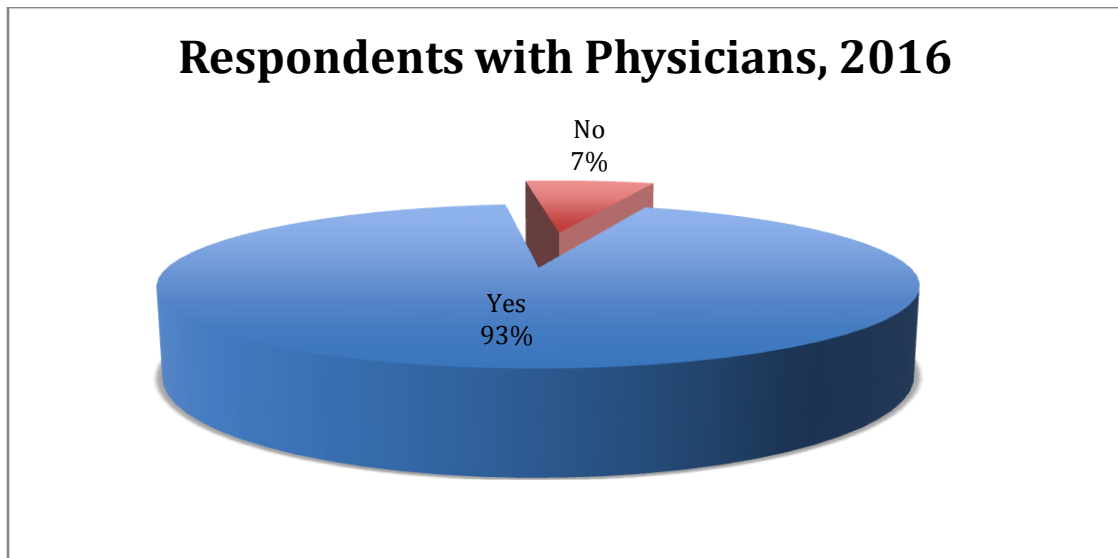
Some parents will get a doctor's note to keep a child home from school when that is not necessary; this creates a truancy problem for the county.

USE OF HEALTH CARE IN THE COMMUNITY

Personal Physicians

Respondents were asked on the CHNA survey if they had a personal physician. Of the 1,089 who answered this question:

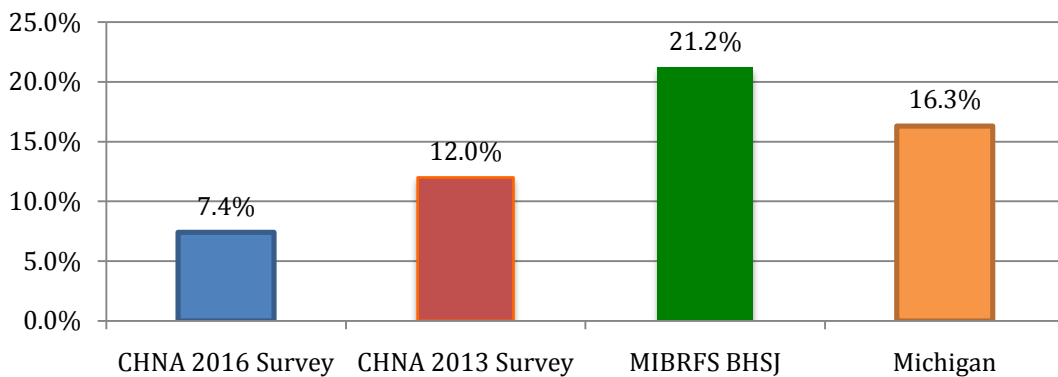
- 1,008 (or 92.6%) said they had a personal physician.
- 81 (or 7.4%) said they did not. This is lower than the 12.0% reported on the 2013 CHNA survey.



Source: CHNA Survey, 2016

21.2% of Branch-Hillsdale-St. Joseph County residents age 18 to 64 reported on the Michigan Behavior Risk Factor Survey that they had no personal physician (2012-14 average.) This is higher than 16.3% reported for Michigan.

Percent of CHNA & MIBRFS Respondents Ages 18 to 64 without Physicians Compared to Michigan

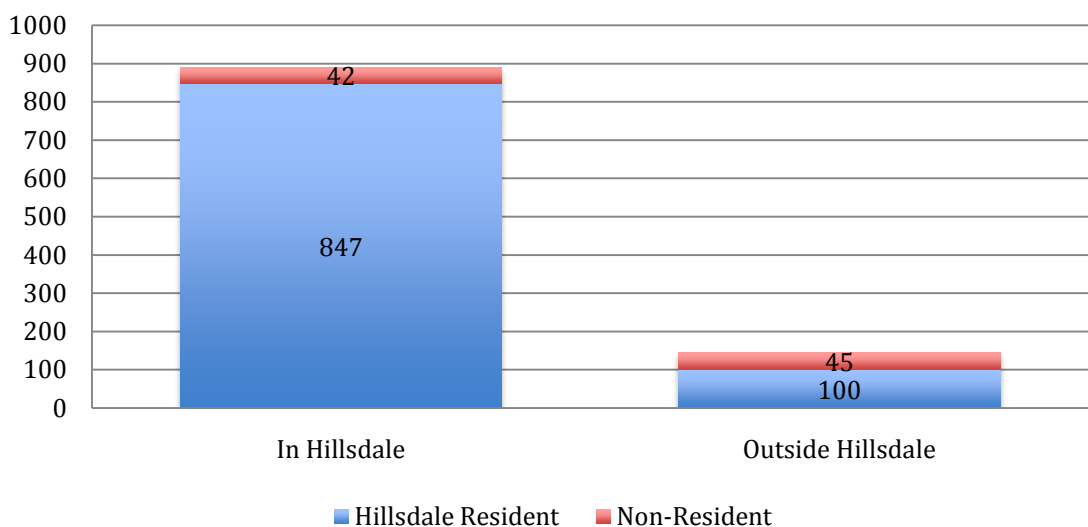


Sources: CHNA Surveys, 2016 and 2013, and Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents compared to Michigan, 2012-2014 Average

Not all respondents to the CHNA survey who said they had a personal physician have a doctor in Hillsdale County. When respondents were asked if their doctor was in Hillsdale County, only 994 people answered the question. Of those who answered:

- 849 (or 85.4%) of respondents said their physician was in Hillsdale. 42 of these respondents were residents of another county.
- 145 (or 14.6%) said their physician was in another county. 45 of these respondents were residents of another county.

Location of Respondents' Physicians



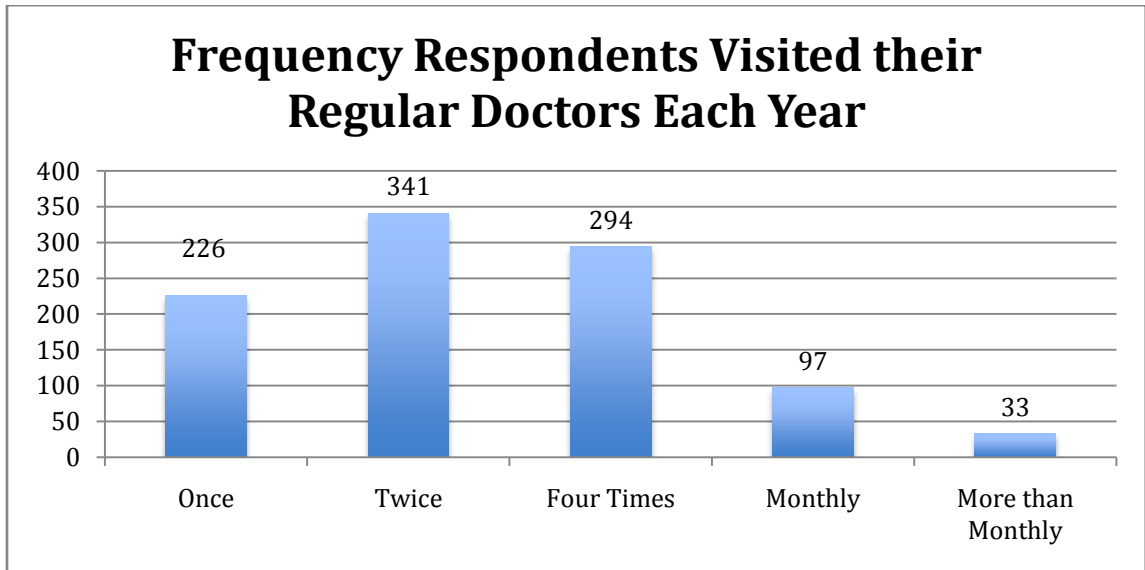
Source: CHNA Survey, 2016

Frequency Respondents Visits Physicians

When asked how often they visited their regular doctor each year:

- 226 respondents said once a year.
- 341 said twice.
- 284 said four times.
- 97 said monthly.
- 33 said more than monthly.

The respondents who visited their doctor monthly or more than once a month may reflect the large number of respondents age 65 or older.

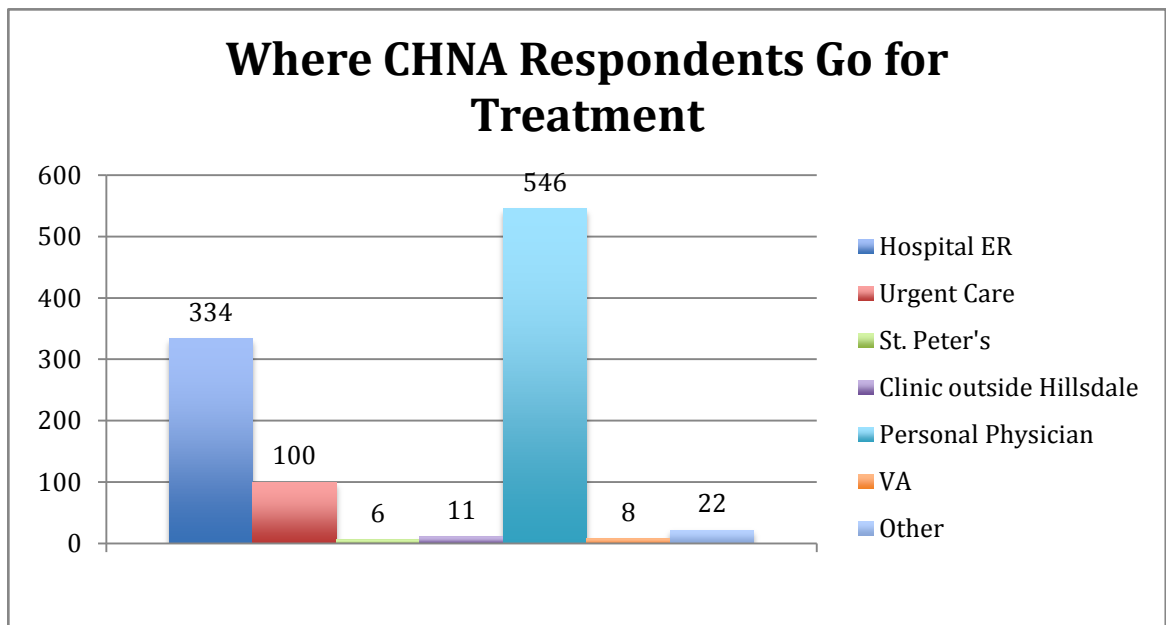


Source: CHNA Survey, 2016

Where County Residents Go for Treatment

When respondents to the CHNA survey were asked where they went for treatment (not counting accidents or a crisis such as a heart attack), 1,030 people answered the question. Of those who answered:

- 546 (or 53.0%) said they went to their own physician.
- 334 (or 32.4%) went to the hospital ER.
- 100 (or 9.7%) went to urgent care.
- 6 (or 0.6%) went to St. Peter's free clinic.
- 11 (or 1.1%) went to clinics outside the area.
- 8 (or 0.7%) went to VA facilities
- 22 (or 2.1%) went other places.



Source: CHNA Survey, 2016

A study of Hillsdale Hospital emergency room visits over the years 2012 to 2015 indicates the number of people using the emergency room each year is relatively stable.

Hillsdale Hospital Emergency Room Visits				
	2012	2013	2014	2015
Emergency Room Visits	25297	24749	22435	23356

Source: Hillsdale Hospital Records, 2012 to 2015

Medicaid Clients and the Emergency Room

The members of the HSN felt those on Medicaid were more likely to seek treatment in the hospital emergency room than from personal physicians. An analysis of the 2016 survey data of those who said they were on Medicaid and answered the question of where they would go for non-emergency treatment showed:

- 48.7% (98) said they would go to the ER.
- 51.3% (103) said they would go to a private doctor, urgent care or clinic.

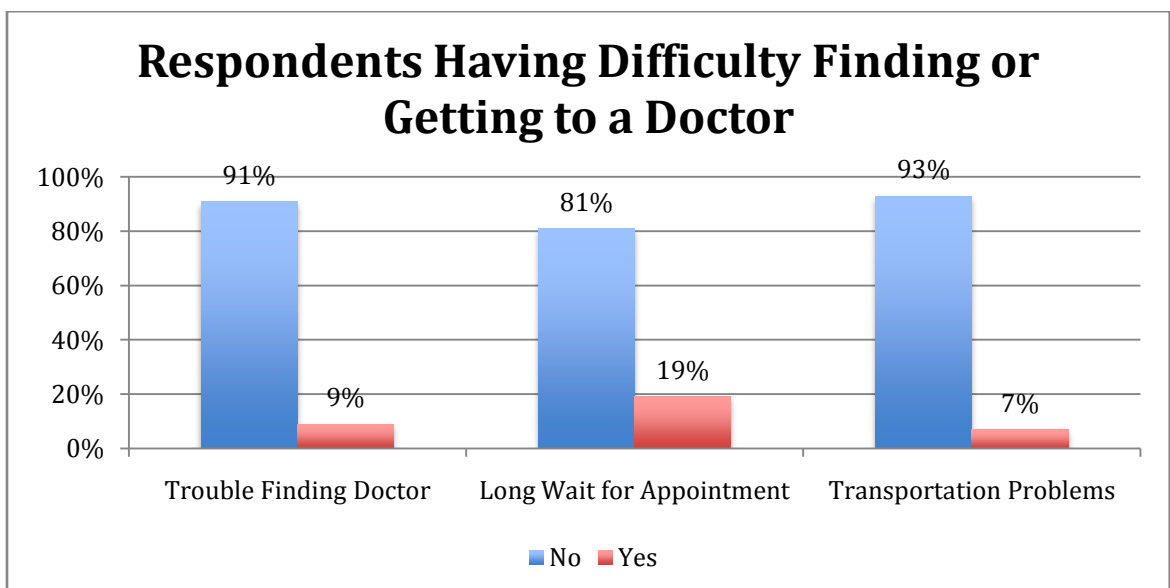
With private insurance plans, a person usually has a deductible or co-payment for emergency room visits. This payment is waived by some plans if the patient is hospitalized. Since Medicaid does not have this provision, it is unlikely that Medicaid clients will change their decision to use the emergency room for non-serious conditions when a visit to a private physician will cost them a co-payment.

Finding or Getting to a Doctor

The 2016 CHNA survey asked respondents if they ever had:

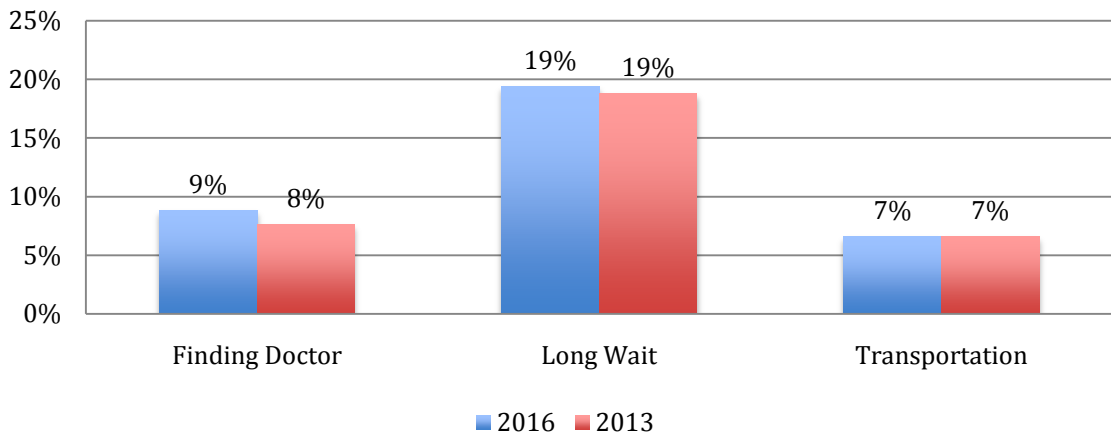
- Trouble finding a doctor.
- A long wait to get a doctor appointment.
- Trouble finding transportation to get to a doctor.

A large majority of respondents had no difficulty finding or getting to a doctor. This is similar to the result found in in the 2013 CHNA survey.



Source: CHNA Survey, 2016

Respondents with Trouble Getting Treatment, 2016 & 2013



Source: CHNA Surveys, 2016 and 2013

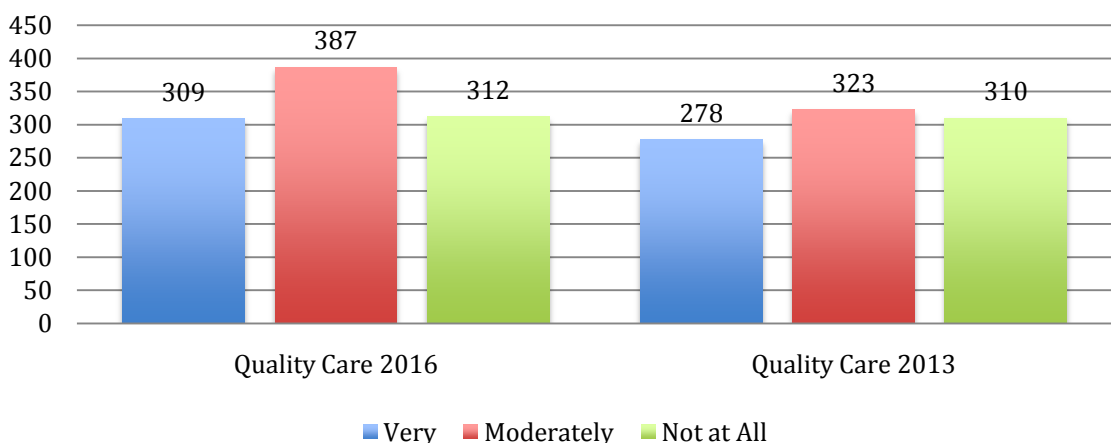
Quality of Care

Respondents to the CHNA survey were asked how concerned they were as a resident of the county about the quality of care. Of the 1,008 who responded to this question:

- 309 (or 30.7%) said they were very concerned.
- 387 (or 38.4%) said they were moderately concerned.
- 312 (or 31.0%) said they were not at all concerned.

These results were fairly similar to what was seen on the 2013 CHNA survey.

Concerns about Quality of Care, 2016 & 2013

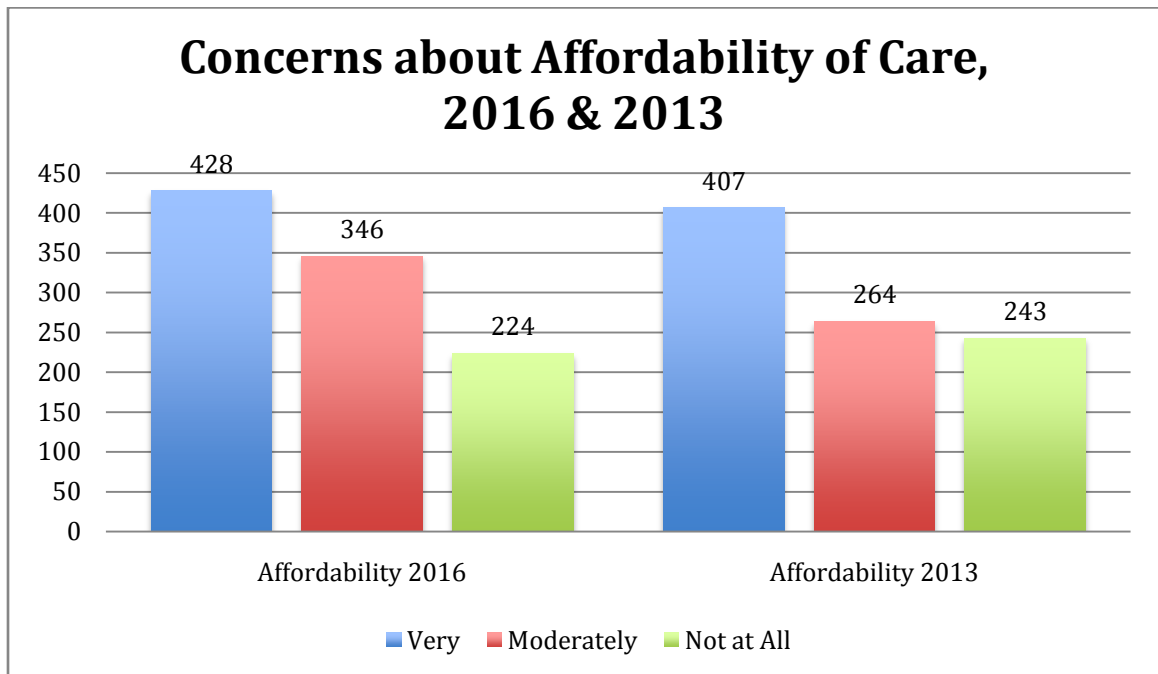


Source: CHNA Surveys, 2016 and 2013

When asked how concerned they were about the affordability of the healthcare available, 998 respondents answered. Their responses showed:

- 428 (or 42.9%) were very concerned.
- 346 (or 34.7%) were moderately concerned.
- 224 (or 22.4%) were not at all concerned.

These responses showed a similar pattern in 2013.



Source: CHNA Surveys, 2016 and 2013

Hospitalizations

Heart disease is the leading cause of hospitalization for Hillsdale County residents.

Leading Causes of Hospitalizations by County of Residence for Hillsdale County and Michigan, Rates per 10,000 Population, 2008-2012			
Principal Diagnosis	Hillsdale Average Number	Hillsdale Rate	Michigan Rate
All Hospitalizations	6,036	1,306	1,310
Heart Disease	805	174	136
Newborns & Neonates (<7 days)	519	112	119
Injury & Poisoning	492	106	104
Females with Deliveries	490	106	114
Pneumonia	292	63	35
Osteoarthritis & Allied Disorders	212	46	39
Psychoses	202	44	48
Cancer (Malignant Neoplasms)	191	31	40
Septicemia	163	35	41
Cerebrovascular Diseases	159	34	35
Chronic Bronchitis	141	31	26
Diseases of Skin/Subcutaneous Tissue	93	20	26
Diverticula of Intestine	65	14	12
Intervertebral Disc Disorders	65	14	15
Asthma	61	13	16
Kidney/UTI	60	13	18
Diabetes Mellitus	58	13	19
Disease of the Blood & Blood Forming Organs	54	12	16
Infectious/Parasitic Diseases	52	11	16
Care/Use of Rehabilitation	38	8	21
All other Conditions	2039	441	476

Source: Michigan Resident Inpatient Files Division for Vital Records and Health Statistics, Michigan Department of Community Health, 2008-12 Average

Hillsdale Hospital Discharge Data

Not all hospitalizations of county residents are at Hillsdale Hospital. But a study of the hospital discharge data shows that the leading cause of hospitalization at Hillsdale Hospital is lung related illnesses followed by heart disease.

Inpatient discharges, Hillsdale Hospital				
	2012	2013	2014	2015 Jan-June
All Discharges	2,828	2,639	2,347	1,072
Pulmonary Medicine	513	403	295	166
Cardiology	325	305	280	144
General Medicine Adult	336	292	285	132
Obstetrics – Delivered	270	312	298	115
General Surgery-Adult	167	122	113	51
Orthopedics	267	196	145	68
Psychiatry	135	120	141	71
Gastroenterology-Medical	187	208	191	82
Neurology	94	96	74	40
Kidney/Urinary	90	104	86	40
Gynecology	56	43	39	17
Substance Abuse	15	22	18	10
All Other	373	416	382	136

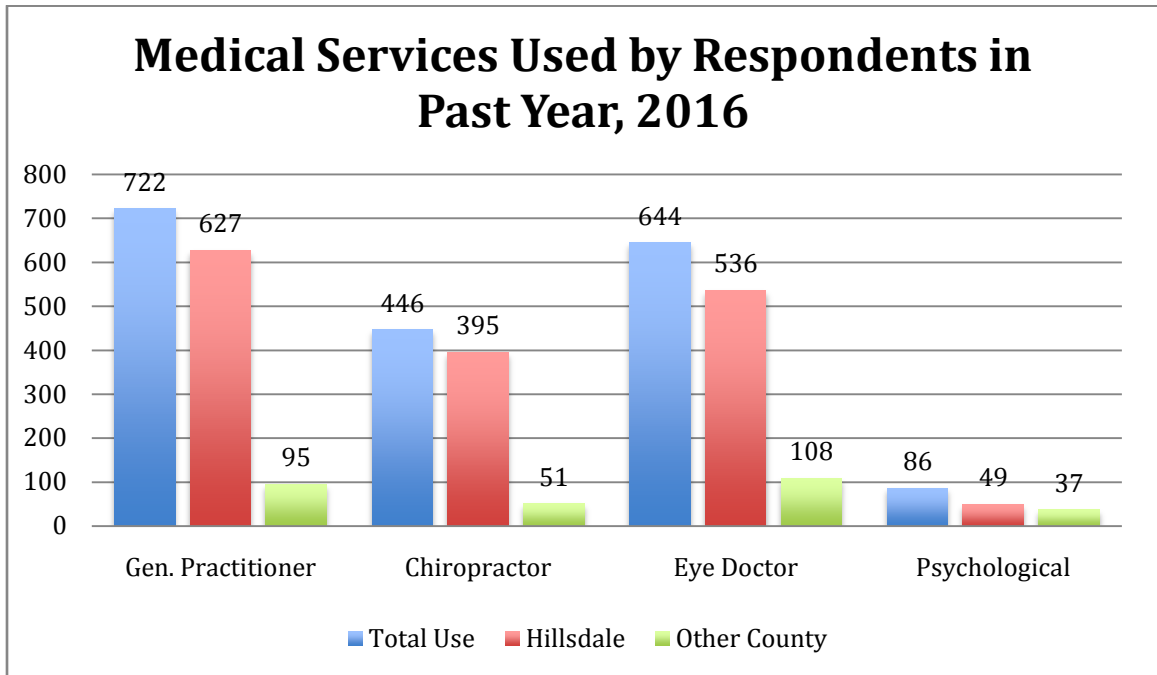
Source: Hillsdale Hospital discharge data, 2012 to June, 2015

Hillsdale Hospital has only one resident cardiologist. Many cardiac patients enter the hospital through the Emergency Department where they are quickly evaluated. Cardiac patients needing specific treatments not available at Hillsdale Hospital are sent by life flight to hospitals with the proper facilities.

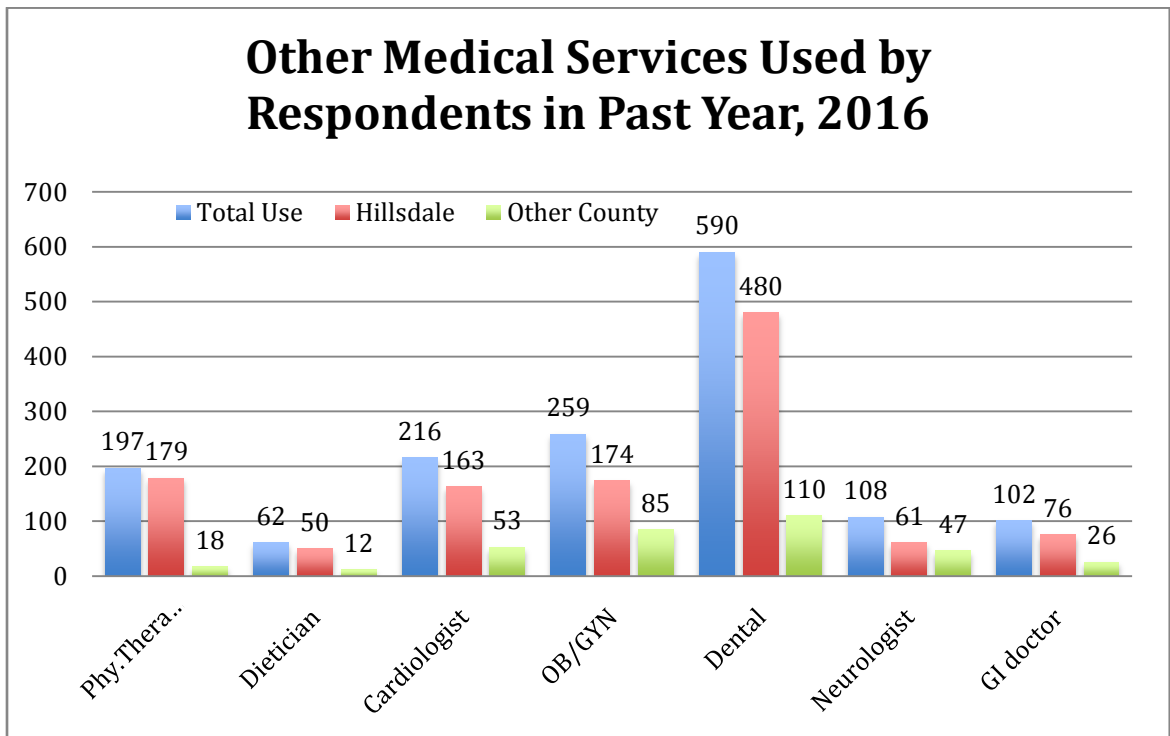
The hospital also life flights patients with other specific conditions when appropriate.

Medical Services Used by Respondents

The CHNA survey asked respondents what health services they had used in the past year and where the practitioners were located.



Source: CHNA Survey, 2016

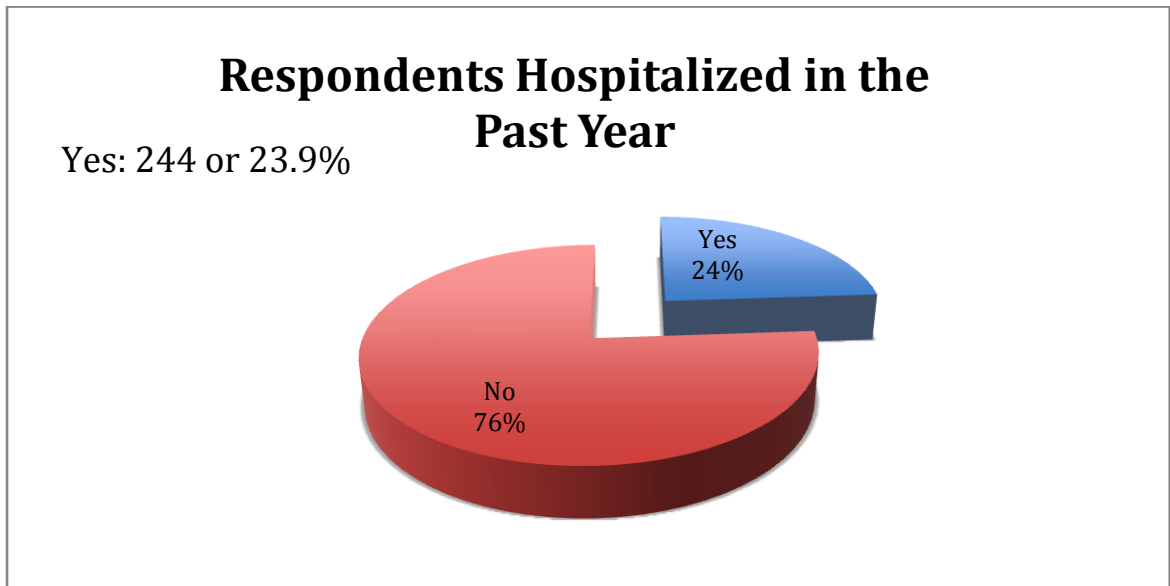


Source: CHNA Survey, 2016

Respondents Use of Hospitals

Respondents to the CHNA survey were asked if they had been hospitalized in the past year. Of 1,021 who answered this question:

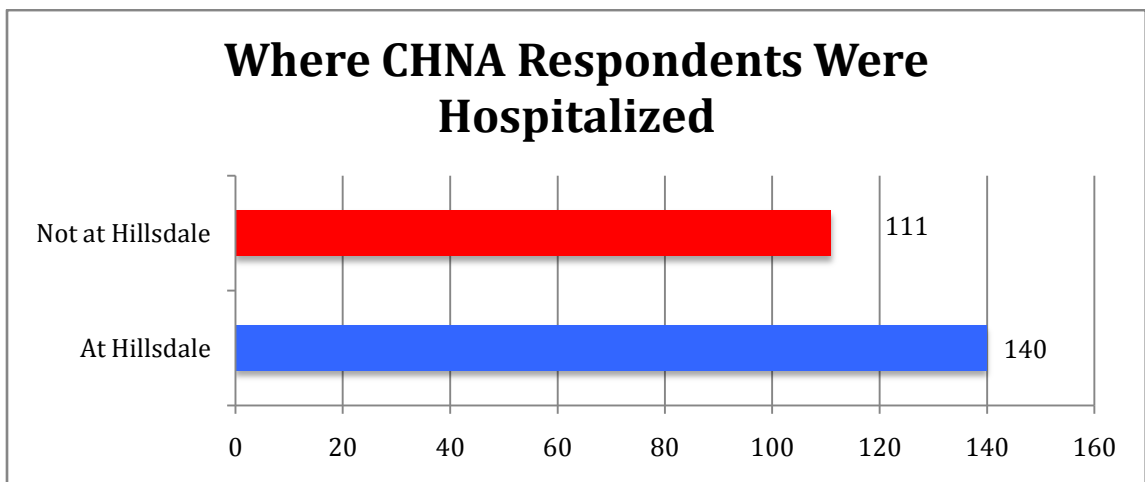
- 244 (or 23.9%) had been hospitalized.
- 777 (or 76.1%) had not been hospitalized.



Source: CHNA Survey, 2016

Respondents were then asked if they were hospitalized, was it at the Hillsdale Hospital. The answer to this question was confusing. 251 people indicated where they were hospitalized, though only 244 had said they were hospitalized in the past year. Of the 251 people:

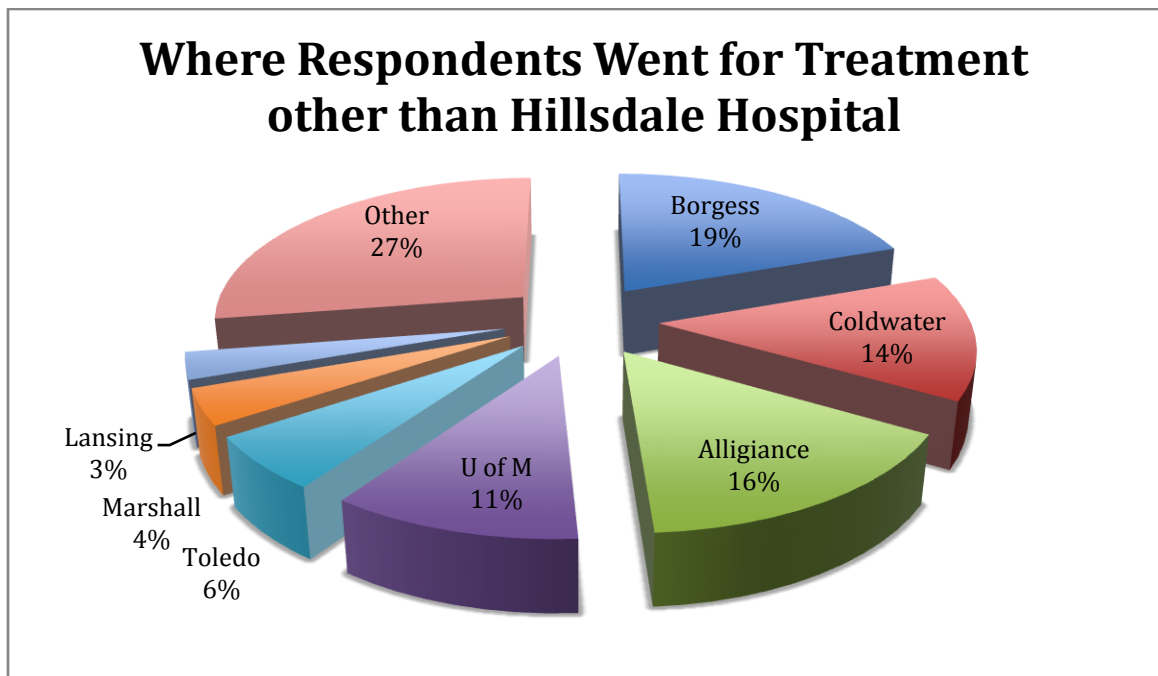
- 140 (55.8%) said it was at Hillsdale.
- 111 (44.2%) said it was not at Hillsdale.



Source: CHNA Survey, 2016

As a follow up question, respondents were asked if they were hospitalized but not in Hillsdale where they went for treatment. 102 respondents answered this question. Their answers showed:

- 20 (or 19.6%) went to Borgess in Kalamazoo.
- 16 (or 15.7%) to Allegiance in Jackson.
- 14 (or 13.8%) to Coldwater Hospital.
- 11 (or 10.8%) to the University of Michigan Hospital in Ann Arbor.
- 5 (or 5.9%) to Toledo Hospital.
- 4 (or 3.9%) to Oaklawn in Marshall.
- 3 (or 2.9%) to Sparrow in Lansing.
- 28 (or 27.4%) to various other places.



Source: CHNA Survey, 2016

Need for Area Medical Specialists

The HSN members felt there was a general shortage of medical specialists in the county, forcing many people to go to professionals outside the area. This was especially noted in the field of child psychiatry.

Hospital Re-Admittance

Hospitals are monitored for the number of patients re-admitted for the same illness within a short period following discharge. Although in some cases this is unavoidable due to the nature of the illness or the actions of the patient following discharge, premature release of patients from a facility or lack of follow-up outpatient monitoring can contribute to the likelihood of re-admittance.

Respondents to the CHNA survey were asked how many times they had been hospitalized in the past year. Of 244 who answered this question:

- 162 (or 66.4%) said it was only once.
- 58 (or 23.8%) said it was two times.
- 24 (or 9.8%) said it was more than two times.

The HSN membership felt that re-hospitalizations could be reduced by if the hospital discharge planner had a greater knowledge of outside resources that patients could utilize once they left the facility. Many resources are listed on the 211 network established by LifeWays to serve county residents.

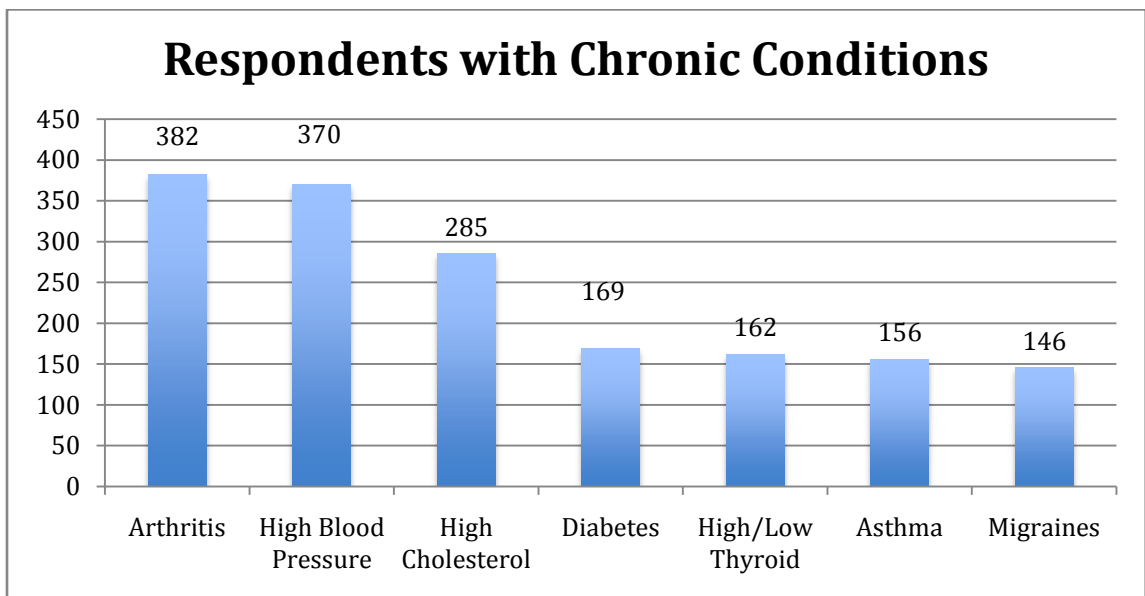
LifeWays is the Community Mental Health Agency serving Hillsdale and Jackson Counties. They provide mental health services to adults, children with serious emotional disturbances, and individuals with developmental disabilities on Medicaid. They also provide services to the uninsured who meet their guidelines.

CHRONIC HEALTH CONDITIONS

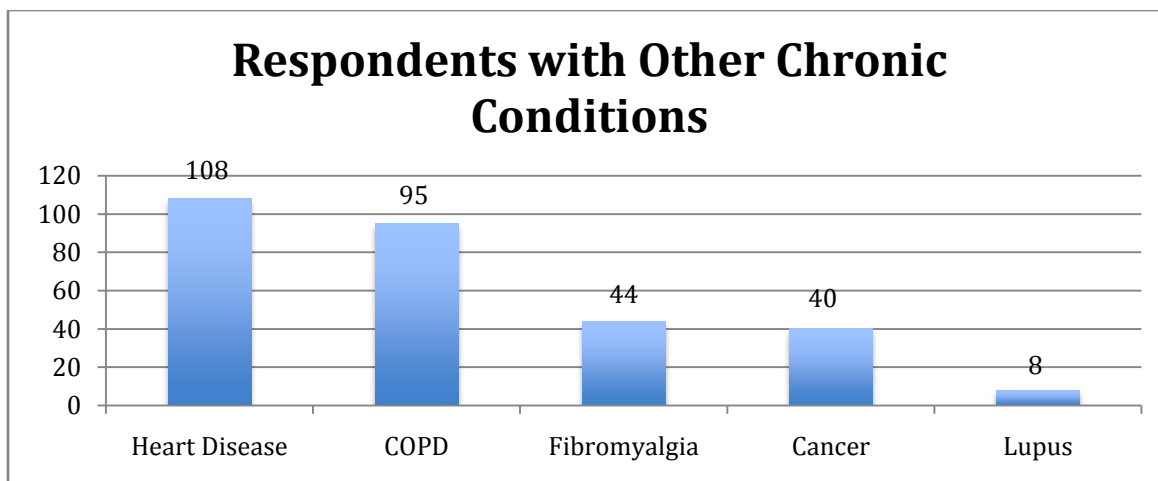
Many chronic conditions contribute to overall poor health.

Respondents to the CHNA survey were asked if they suffered from select chronic conditions. Their answers revealed:

- 382 (or 40.9%) said arthritis.
- 370 (or 38.5%) identified high blood pressure.
- 285 (or 30.2%) said high cholesterol.
- 169 (or 18.2%) said diabetes.
- 162 (or 17.7%) had high or low thyroid.
- 156 (or 17.1%) said asthma.
- 146 (or 16.2%) had migraines.
- 108 (or 12.0%) said heart disease.
- 95 (or 10.5%) had COPD.
- 44 (or 4.9%) suffered from fibromyalgia.
- 40 (or 4.5%) said cancer.
- 8 (or 0.9%) had Lupus.
- 70 (or 7.8%) said they had other conditions.



Source: CHNA Survey, 2016



Source: CHNA Survey, 2016

Secondary data from the Michigan Behavioral Risk Factor Survey for the Branch-Hillsdale-St. Joseph area compared to Michigan (2012-2014 average) shows:

- 33.9% of residents were told they had arthritis, compared to 31.7% in Michigan.
- 13.6% were told they had cancer, compared to 12.2% in Michigan.
- 12.5% reported they had asthma, compared to 15.8% in Michigan.
- 10.5% reported having diabetes, compared to 10.4% in Michigan.
- 9.7% were told they had cardiovascular disease, compared to 10.0% in Michigan.
- 8.2% reported they had chronic obstructive pulmonary disease (COPD), compared to 8.3% in Michigan.
- 5.6% of residents were told by a doctor they had a heart attack, compared to 5.2% in Michigan.
- 4.7% had angina or coronary heart disease, compared to 5.2% in Michigan.
- 3.2% reported they had a stroke, compared to 3.4% in Michigan.

Percent of Branch-Hillsdale-St. Joseph Residents with Select Health Conditions, 2012-14 Average, Michigan Behavioral Risk Factor Survey		
Condition	Branch-Hillsdale-St. Joseph	Michigan
Arthritis	33.9%	31.7%
Cancer	13.6%	12.2%
Asthma	12.5%	15.8%
Diabetes	10.5%	10.4%
Cardiovascular Disease	9.7%	10.0%
COPD	8.2%	8.3%
Heart Attack	5.6%	5.2%
Angina/Coronary Heart Disease	4.7%	5.2%
Stroke	3.2%	3.4%

Source: Michigan Behavioral Risk Factor Survey, 2012-14 Averages

BEHAVIOR RELATED HEALTH ISSUES

Many behavioral factors can lead to, or increase the severity of, some diseases. Among these are:

- Obesity
- Smoking
- Drinking alcohol to excess
- Substance abuse

Respondents to the CHNA survey were asked about these indicators, and the results were compared to secondary data sources.

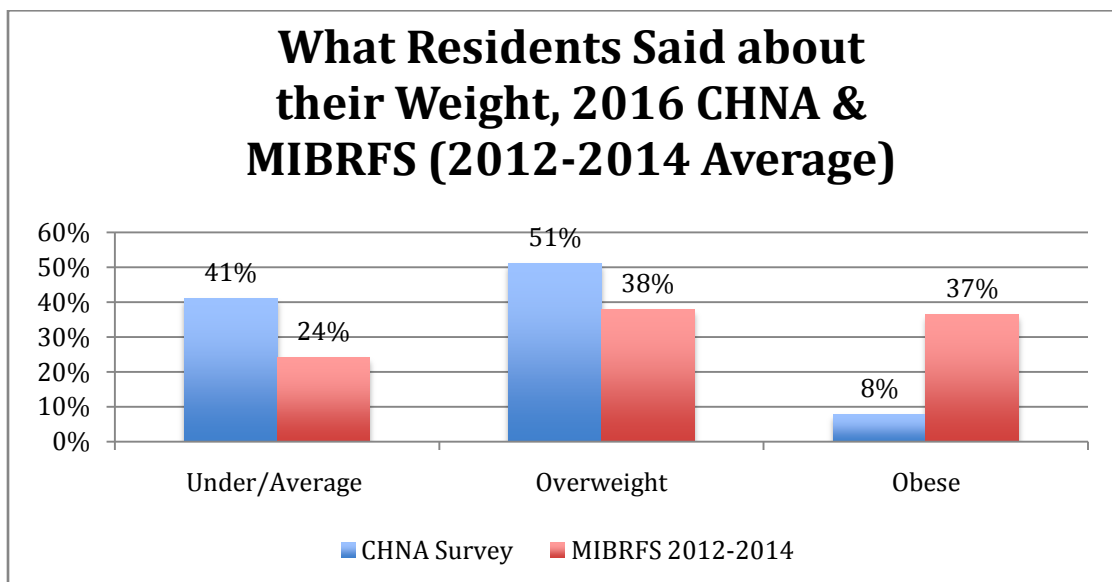
Obesity

Obesity is a major factor in the control of diabetes, heart disease and other chronic conditions.

When asked on the CHNA survey how they would best describe their weight, 1,013 respondents answered the question. Of these:

- 34 (or 3.4%) said they were underweight.
- 383 (or 37.8%) said they were average weight.
- 518 (or 51.1%) said they were overweight.
- 78 (or 7.7%) said they were obese.

These results differ from the Michigan Behavior Risk Factor Survey of Branch-Hillsdale-St. Joseph residents which showed a larger proportion of adults considered themselves obese.



Sources: CHNA Survey, 2016 and Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents, 2012-2014 Average

Weight control is a problem for many residents; 516 (or 51.2%) of the 2016 CHNA survey respondents said they were concerned about their own weight.

Hillsdale Hospital offers a multidisciplinary approach to treat obesity.

1. The hospital has a resident dietician. Area doctors can refer overweight or obese patients to the dietician for consultation on diets and diet modification.
2. Regular seminars are conducted for those interested in weight loss surgery to explain procedures and expected outcomes.
3. The hospital offers several surgical procedures in conjunction with the Hillsdale Surgical Group for those interested in surgical intervention.

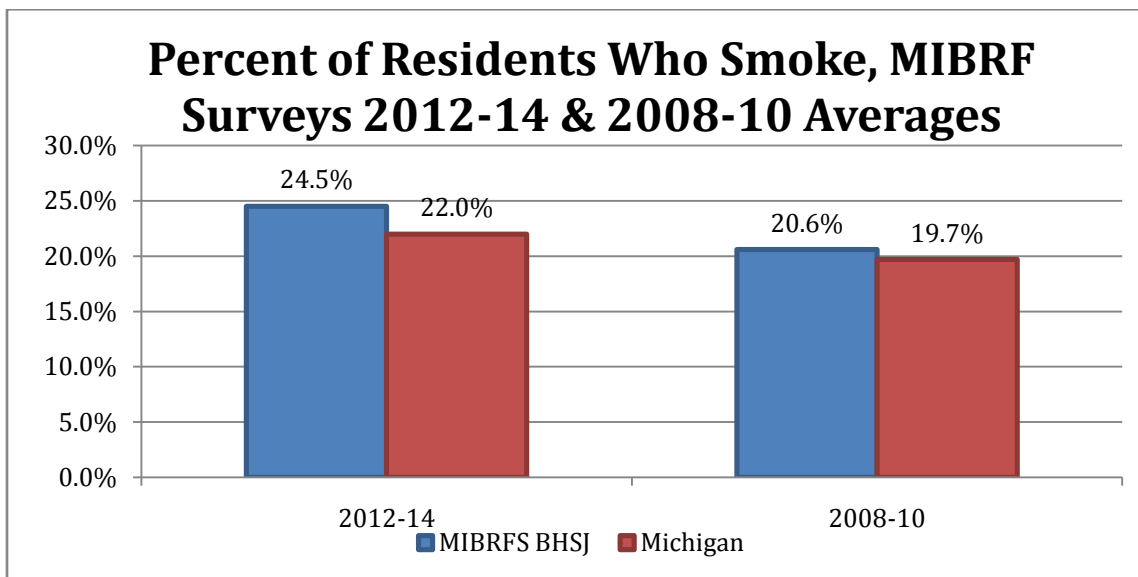
The HSN membership was concerned about obesity among county residents.

- Many noted the correlation between obesity and chronic diseases like heart disease and diabetes.
- The general observation was that obesity is an issue among children as well as adults, and the number of morbidly obese residents is on the increase.

Smoking

A higher percentage of Hillsdale County residents smoke, compared to Michigan.

24.5% of Branch-Hillsdale-St. Joseph County adult residents said they smoke on the Michigan Behavioral Risk Factor Surveys, 2012-2014 average, compared to 22% in Michigan. Despite anti-smoking programs, the percentage of smokers has actually increased since the 2008-10 MIBRF survey.

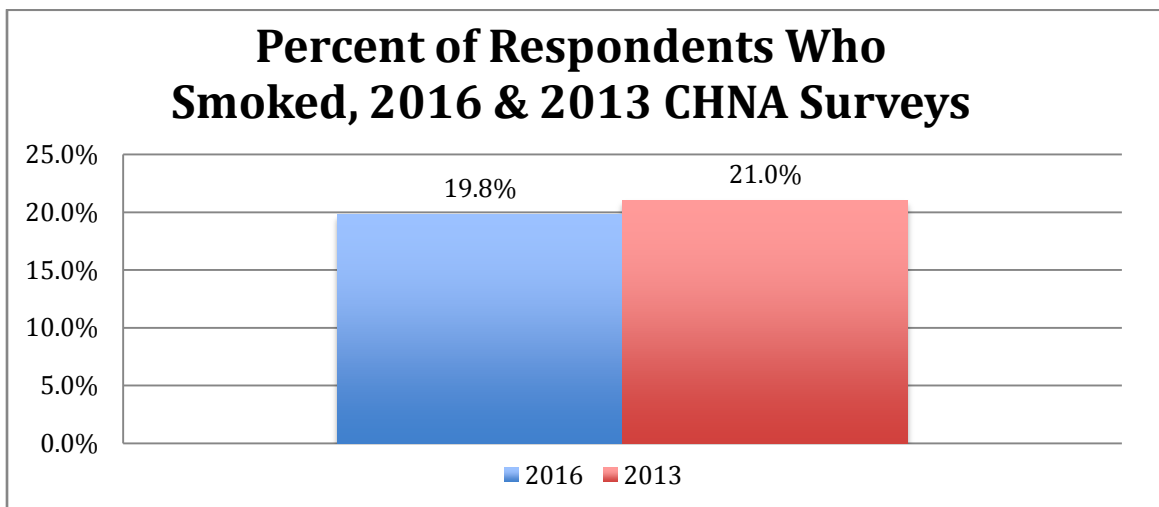


Sources: Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2008-2010 and 2012-14 Averages

Respondents to the CHNA 2016 survey were asked if they currently smoke. Of the 1036 who answered this question:

- 205 (or 19.8%) said they smoked.
- 831 (or 80.2%) said they did not.

This is comparable to the 2013 CHNA survey where 98 (or 21%) of the 945 respondents who answered this question said they smoked.

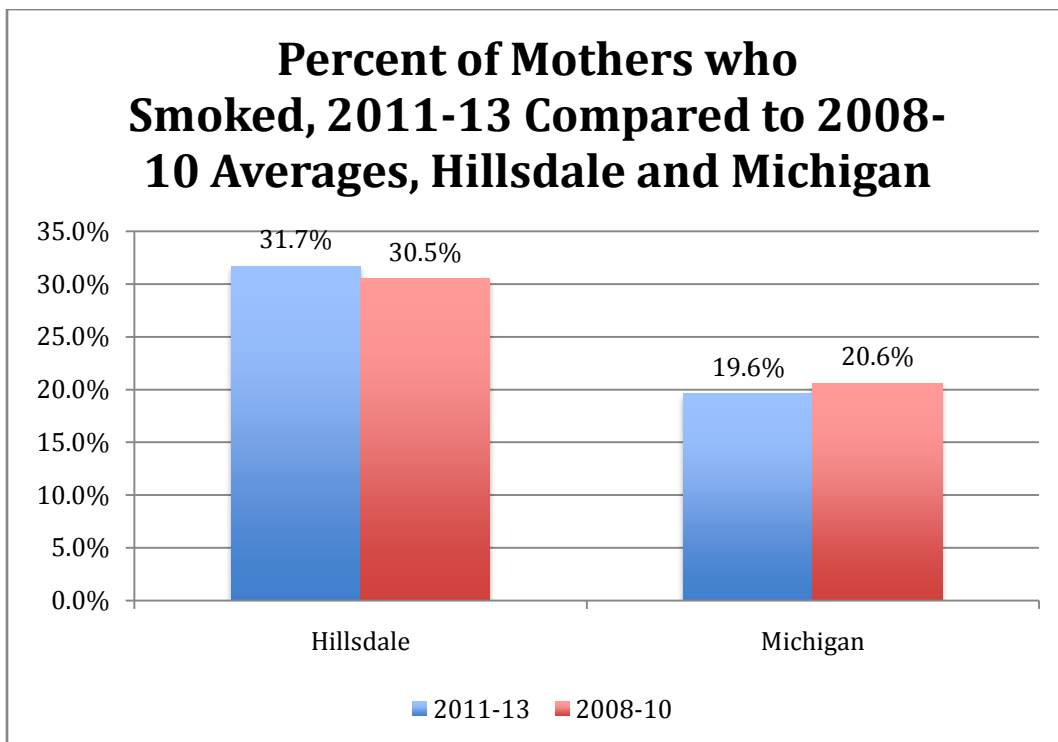


Source: CHNA Surveys, 2016 and 2013

Smoking and Live Births

Smoking is a significant problem among pregnant women.

The Michigan Resident Birth Files reveal that a larger percent of Hillsdale mothers used tobacco before or during pregnancy compared to Michigan mothers. The average number of live births for county residents during the period 2011 to 2013 was 542. During this period, 31.7% of mothers reported they smoked, compared to 19.6% of Michigan mothers. This is not much different than found when the 2008-10 average birth statistics were reported.



Source: Michigan Resident Inpatient Files Division for Vital Records and Health Statistics, Michigan Department of Community Health, 2011-13 and 2008-10 Averages.

The HSN membership identified the use of tobacco as a gateway drug and a problem for pregnant mothers. They noted, based on their experiences, that many people choose tobacco over food. They also said the community use of nicotine in the form of vapors and chewing tobacco was a problem as well.

Drinking

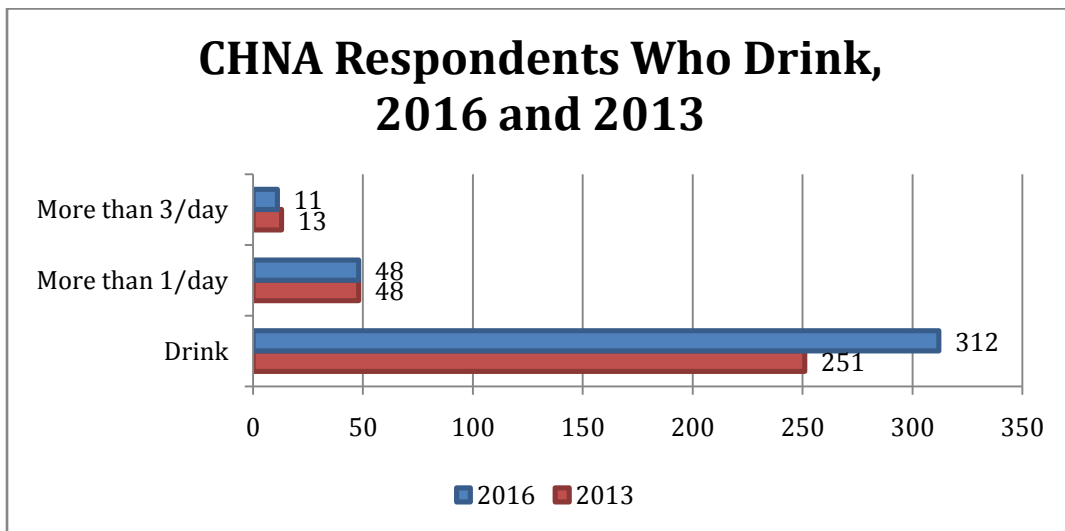
Respondents to the CHNA survey were asked about their drinking habits.

Of the 1,012 people who told us about consuming any alcohol, 312 (or 30.8%) said they did.

Fewer people answered the question about how many drinks they had each day. When asked if they drink more than one a day, only 380 people answered. Of these, 48 (12.6%) said they consume more than one drink a day.

An even smaller number, 11 (4.4%), said they drink more than three a day, though only 248 respondents answered this question.

These results were similar to what was seen on the 2013 CHNA survey.



Source: CHNA Surveys, 2016 and 2013

15.7% of Branch-Hillsdale-St. Joseph County residents reported binge drinking, (consuming five or more drinks on one occasion in the past month) on the Michigan Behavior Risk Factor Survey, 2012-14 average. This is lower than 19.0% reported for Michigan but higher than the 11.2% of tri-county residents that was reported in the 2008-10 MIBRFS.

Drinking Patterns, Branch-Hillsdale-St. Joseph & Michigan Residents			
	Any Alcohol	Heavy Drinking	Binge Drinking
Branch-Hillsdale-St. Joseph	46.9%	5.6%	15.7%
Michigan	56.7%	6.4%	19.0%

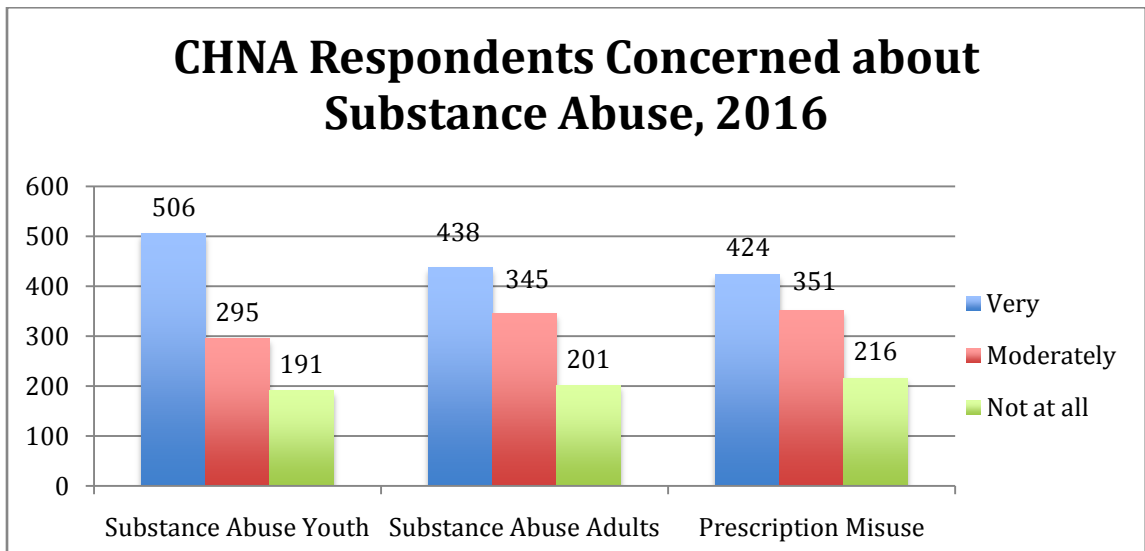
Sources: Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2012-14 Average

The HSN identified alcohol as another gateway drug and a significant component in domestic violence and homelessness.

Substance Abuse

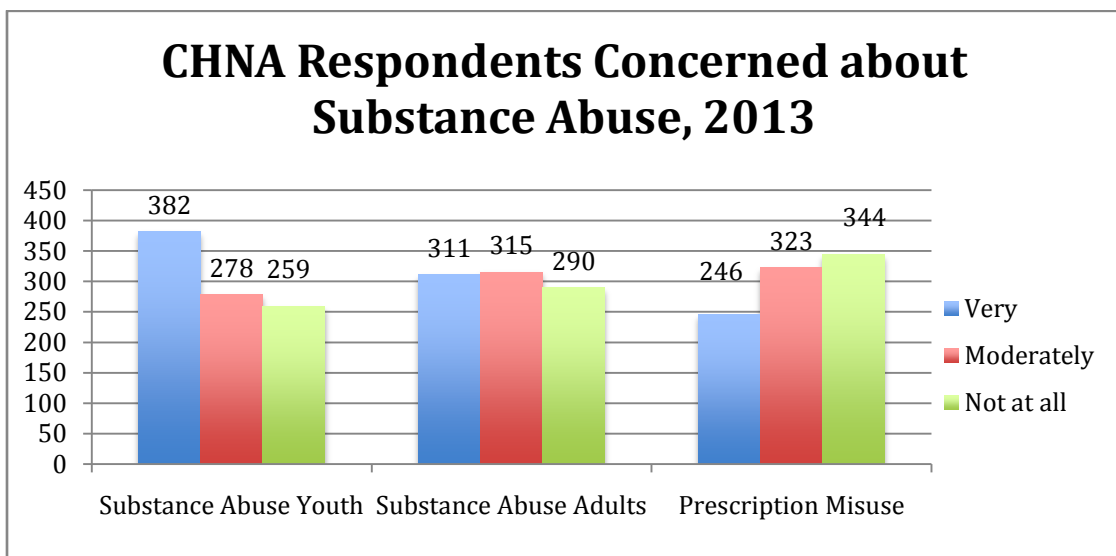
Substance abuse can involve both legal and illegal substances.

When respondents on the CHNA survey were asked if they were very concerned, moderately concerned, or not at all concerned about substance abuse, more were concerned about substance abuse in youth than in adults or about the misuse of prescription drugs.



Source: CHNA Survey, 2016

Although respondents were concerned about substance abuse among youth in the 2013 survey, they were much less concerned about substance abuse among adults and the misuse of prescriptions in 2013 than they were in 2016.



Source: CHNA Survey, 2013

Use of Marijuana, Cocaine or Illegal Drugs

Michigan voters approved the medical use of marijuana in November, 2008; the law became effective in December of that year.

44 of the respondents to the CHNA survey said they use marijuana. The survey question was not limited to medical marijuana use, so it is impossible to tell if the respondents were using the drug under medical supervision.

Four respondents said they use cocaine; six said they use some other illegal drug.

Community Concerns

The members of the HSN were very concerned about substance abuse.

- Misuse of prescription drugs is a growing concern. Some adults are misusing their prescription drugs by not following the recommended dosage schedule. In addition, medications may be used by those for whom the drugs were not prescribed.
- An over prescription of opiates, as well as a general over prescription of non-narcotic drugs, is a problem, especially for seniors.
- The suggestion was made that the hospital routinely use the Medical Automated Prescription System (MAPS) to prevent over prescription of drugs and curtail the possibility of patients going from one doctor to another to get a supply of opiates and other drugs.
- It was noted tobacco and alcohol were gateway drugs to substance abuse.
- Substance abuse impacts homelessness and domestic violence. It is believed that substance abuse accounts for 85% of Hillsdale children petitioned to be removed from homes into foster care.
- Overdosing on meth has become a problem for the community.
- Members believed heroin was cheaper to acquire than other opiates on the streets.
- The lack of beds dedicated to detoxification at the hospital is an impediment to effective substance abuse treatment. Patients hospitalized for drug overdose cannot be evaluated for mental illness until detoxification is complete, so they cannot be immediately admitted to the hospital psych unit. This is due to the certificate of need filed when the psych unit was created.
- Many community-based programs are available for substance abuse treatment, but a better interface between the hospital and area professionals is needed for more effective patient management.

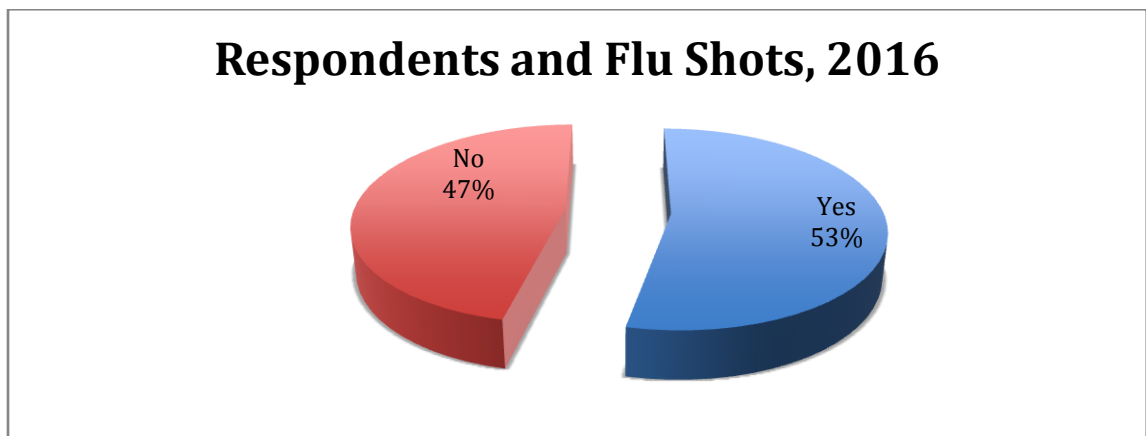
PREVENTIVE CARE: IMMUNIZATIONS

Many infectious diseases such as influenza and pneumococcal pneumonia can be prevented by immunization.

Influenza vaccines

Influenza vaccines are given on a yearly basis. The vaccine produced is based upon the strain of flu virus predicted for that year by the Centers for Disease control.

When asked on the CHNA survey if they had a flu shot within the last year, 1,023 people answered the question. Of those who answered, 547 (or 53.5%) said they had been immunized. This is consistent with the 2013 CHNA survey which revealed 51% had a flu shot.



Source: CHNA Survey, 2016

The Michigan Behavior Risk Factor Survey, 2012-2014 average, showed 48.1% of Branch-Hillsdale-St. Joseph residents age 65 or older had received a flu shot in the last year. This is less than the 56.6% reported for all Michigan residents in this age group. The 2008-10 average was 65.9% for tri-county residents and 68.9% in Michigan.

Flu Vaccination Branch Hillsdale St. Joseph Residents Age 65 or Older Compared to Michigan		
	2012-14	2008-10
Branch-Hillsdale-St. Joseph	48.1%	65.9%
Michigan	56.6%	68.9%

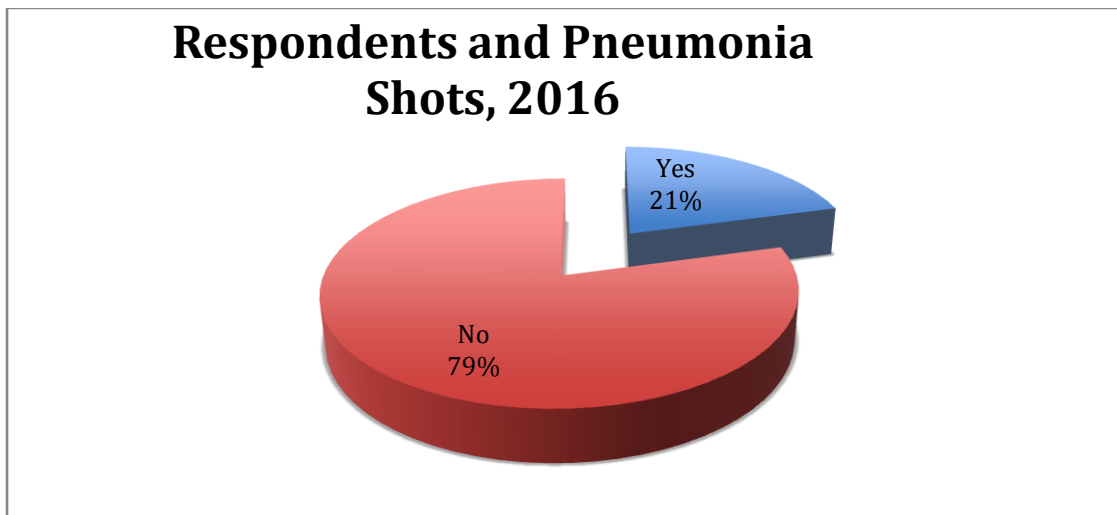
Source: Michigan Behavior Risk Factor Surveys, 2012-14 and 2008-10 Averages

Bacterial pneumonia

Bacterial pneumonia is caused by *Streptococcus pneumoniae* (pneumococcus). The Centers for Disease Control estimates that about one million people are hospitalized with pneumonia annually in the United States and 50,000 die from the disease. About half of these cases are preventable through the use of the available vaccine.

One vaccination with pneumococcal conjugate vaccine (PCV13) is recommended for people under age 65, or those with immunocompromised conditions. A second immunization is recommended after the age of 65 with a dose of pneumococcal polysaccharide vaccine (PPSV23.)

The CHNA survey asked respondents if they had received a pneumonia shot in the past year. 206 (or 20.6%) of 1,001 respondents to the CHNA survey who answered this question said they had. This is comparable to the 18% who said they had done so on the 2013 CHNA survey.



Source: CHNA Survey, 2016

The Michigan Behavior Risk Factor Survey asked respondents if they had ever had a pneumonia vaccine. The 2012-14 average, showed 66.3% of Branch-Hillsdale-St. Joseph residents age 65 or older. This is comparable to the 68.2% reported for all Michigan residents in this age group. But the 2008-2010 average had found 72.2% of Branch-Hillsdale-St. Joseph residents age 65 or older had ever received a pneumonia vaccine, compared to 67.1% reported for all Michigan residents in this age group.

Pneumonia Vaccination Branch Hillsdale St. Joseph Residents Age 65 or Older Compared to Michigan		
	2012-14	2008-10
Branch-Hillsdale-St. Joseph	66.3%	72.2%
Michigan	68.2%	67.1%

Source: Michigan Behavior Risk Factor Surveys, 2012-14 and 2008-10 Averages

Community Response on Immunizations

The HSN membership organizations, especially Perennial Park (Hillsdale County's Area on Aging Senior Center) and the Branch-Hillsdale-St. Joseph Community Health Agency, continue to heavily promote immunizations for influenza and bacterial pneumonia.

Members felt that many people did not get an annual flu vaccine since the effectiveness of the vaccine has varied based on the actual viral strain that becomes prevalent each year.

Members felt that some residents have the misconception that a flu shot may actually give them the flu.

The general reluctance of individuals to get any shot may also be a factor.

PREVENTIVE CARE: CANCER SCREENINGS

Detecting cancer at an early stage can impact the course of the disease. Medical tests for many cancers are continuing to be developed but some tests have been in widespread use for many years including mammograms, prostate and colon cancer screenings.

Mammograms

The United States Preventive Services Task Force recommends women age 50 to 74 should have a mammogram every two years. Women age 40 to 49 and those at higher risk of breast cancer due to family history or another reason should follow the recommendations of their physicians.

When asked on the CHNA survey if they had a mammogram in the past year, 312 (or 41.8%) of the women said yes.

The Michigan Behavior Risk Factor Survey, 2012 -14 average, showed 45.7% of Branch-Hillsdale-St. Joseph female residents age 40 or older had a clinical breast exam and mammogram in the past year, compared to 49.1% for all Michigan residents in this age group.

Prostate Screening

There are two commonly used tests to screen for prostate cancer.

The first test is a digital rectal exam. This is usually performed in the doctor's office during a routine male physical.

The second test is the prostate specific antigen (PSA) test. PSA antigen is made by the prostate gland. The level of this antigen in the blood can be higher in men who have prostate cancer but can also be elevated due to other factors. The value of the PSA test remains controversial, and there is disagreement about how frequently it should be conducted. Its appropriateness should be evaluated on a case-by-case basis.

When asked on the CHNA survey if they had a prostate screening in the past year, 108 of the 332 men who answered the survey said yes. This represents 32.5% of the men.

The Michigan Behavior Risk Factor Survey, 2012 -14 average, showed 41.0% of Branch-Hillsdale-St. Joseph male residents age 50 or older had a PSA test in the past year, compared to 46.3% for all Michigan residents in this age group.

Colonoscopy

The American Cancer Society (ACS) recommends both men and women have a colonoscopy every 10 years beginning at age 50, with follow-up tests on a more frequent basis if polyps or cancer are detected. The ACS also recommends a yearly fecal sample test to detect the presence of blood, a possible indicator of cancer.

When asked on the CHNA survey if they had a colonoscopy in the past year, 121 (or 19.5%) of the respondents said yes.

The Michigan Behavior Risk Factor Survey, 2012-14 average, showed 58.9% of Branch-Hillsdale-St. Joseph adults age 50 or older had ever had a colorectal screening, compared to 68.6% for all Michigan residents in this age group.

Pap Smears

Pap Smears are a rapid test to detect cervical cancer. The CDC recommends Pap tests for all women between 21 and 65 years old at intervals recommended by their doctors. Women age 65 and older who have had negative Pap tests for several years or who had their cervix removed should follow the recommendation of their doctor.

When asked on the CHNA survey if they had a Pap smear in the past year, 319 (or 42.6%) of the female respondents said yes.

The Michigan Behavior Risk Factor Survey, 2012-14 average, showed 73.1% of Branch-Hillsdale-St. Joseph female residents age 18 or older had a Pap smear within the previous three years, compared to 77.2% for all Michigan residents in this age group.

Summary of Screening Tests

Screening Tests, CHNA Respondents and MIBRF Survey, 2012-14 Average			
	CHNA 2016	Branch-Hillsdale-St Joseph	Michigan
Mammogram past year	41.8%	45.7%	49.1%
Prostate Screen past year	32.5%	41.0%	46.3%
Colonoscopy	19.5% past year	58.9% ever	68.6% ever
Pap Test	42.6% past year	73.1% past 3 years	77.2% past 3 years

Source: CHNA Survey, 2016 and Michigan Behavior Risk Factor Survey, Branch-Hillsdale-St. Joseph Residents and Michigan, 2012-14 Average

Community Response

The HSN membership noted that the hospital has increased free or reduced-cost cancer screenings for community members in the past years. But the county lacks a wellness initiative.

Sturgis and Three Rivers Hospitals partner with local companies and/or a company's insurance provider to do on-site wellness checks.

HSN members also suggested the hospital help establish clinics in schools similar to the Branch County model which:

- Gives primary care to the school children.
- Addresses adolescent health issues.
- Provides education on various health issues.

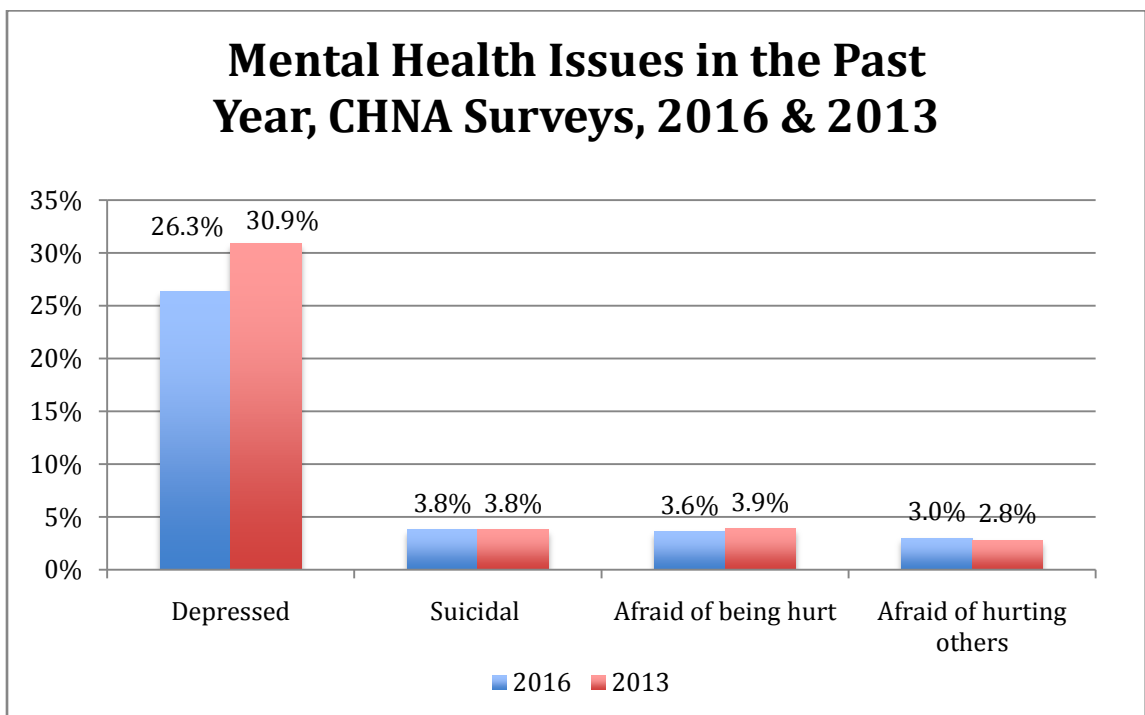
MENTAL HEALTH ISSUES

Mental health impacts not just the individual but the community. Additionally, feelings of wellbeing have a positive impact on the management and progress of some diseases.

When respondents to the CHNA survey were asked about their mental health in the past year:

- 267 (or 26.3%) of the 1,016 respondents to the question had been depressed for more than a week.
- 39 (or 3.8%) of the 1,008 respondents to the question had been suicidal.
- 36 (or 3.6%) of the 1,008 respondents to the questions were afraid of being hurt.
- 30 (or 3.0%) of the 1,007 respondents to the question were afraid they would hurt others.

These results were similar to what was seen on the 2013 CHNA survey.



Source: CHNA Surveys, 2016 and 2013

The Michigan Behavioral Risk Factor Survey asked respondents about their mental health. The proportion of adults in the Branch-Hillsdale-St. Joseph health jurisdiction who said their mental health was not good (including stress, emotional difficulties, or depression) on 14 out of the last 30 days was 12.7% compared to 12.6% in Michigan (2012-14 average).

Hillsdale Hospital has a 10-bed psychiatric unit. Examination of the hospital discharge data shows the hospital had an average of 132 psychiatric patients each year.

Inpatient Discharges, Hillsdale Hospital				
	2012	2013	2014	2015 Jan-June
Psychiatry	135	120	141	71

Source: Hillsdale Hospital discharge data, 2012 to June 2015

Community Concerns

The HSN members were very concerned about depression and mental health issues among community residents.

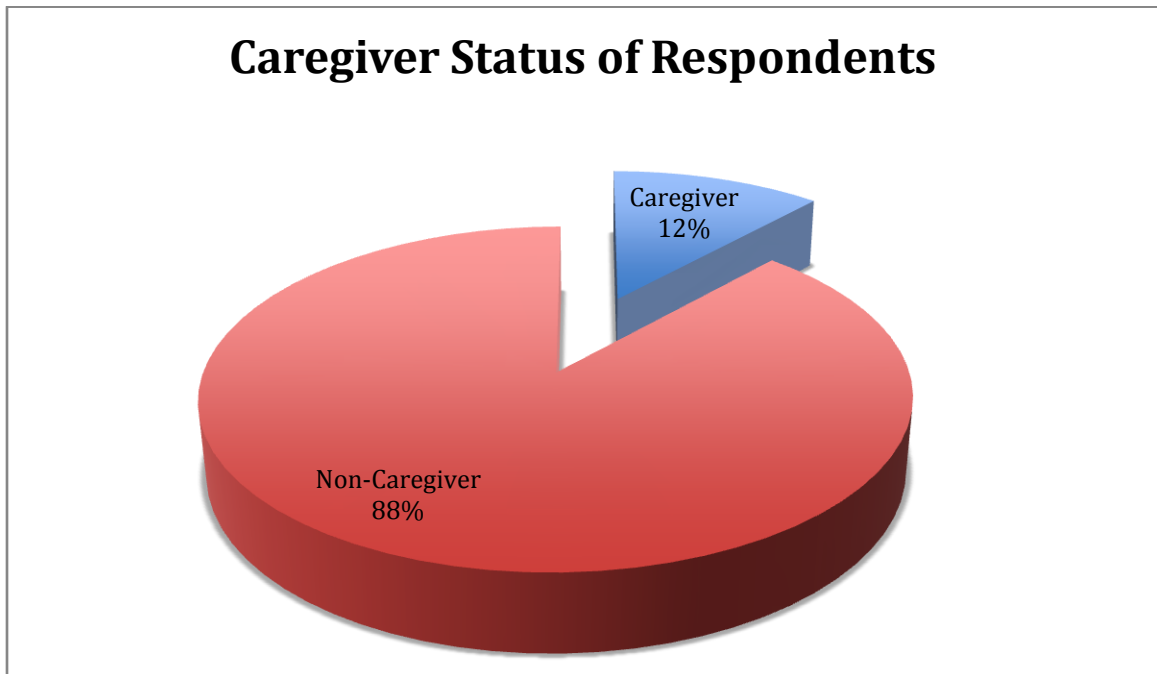
- There is a great need for specialists in the mental health area in this community, especially in the treatment of pediatric patients.
- There needs to be a better knowledge of mental health resources available in the community.
- Private insurance often does not cover treatment, and Medicaid (which few providers take) only covers a specified number of visits, so many patients receive less than adequate treatment.
- While depression screenings are done by some area agencies on a regular basis, it was recommended that the hospital staff check all patients for depression.
- LifeWays prefers to keep people in their homes for community-based treatment, since that is more effective unless the home environment is itself an issue. A stronger interface between this agency and the hospital should be encouraged.

CAREGIVERS

Caring for others can produce stress in caregivers and impact their physical and mental wellbeing.

The CHNA 2016 survey asked respondents about whether they were caregivers for any sick or aged person. Of the 1,043 people who answered this question:

- 122 (or 11.7%) said they were.
- 921 (or 88.3%) were not.



Source: CHNA Survey, 2016

A follow up question was asked about whether caregivers lived with the person for whom they were caring. 67 respondents, roughly half of all 122 caregivers, said they did.

Caregivers were then asked how they would rate the healthcare service or support that was needed. Of the 114 respondents who answered this question:

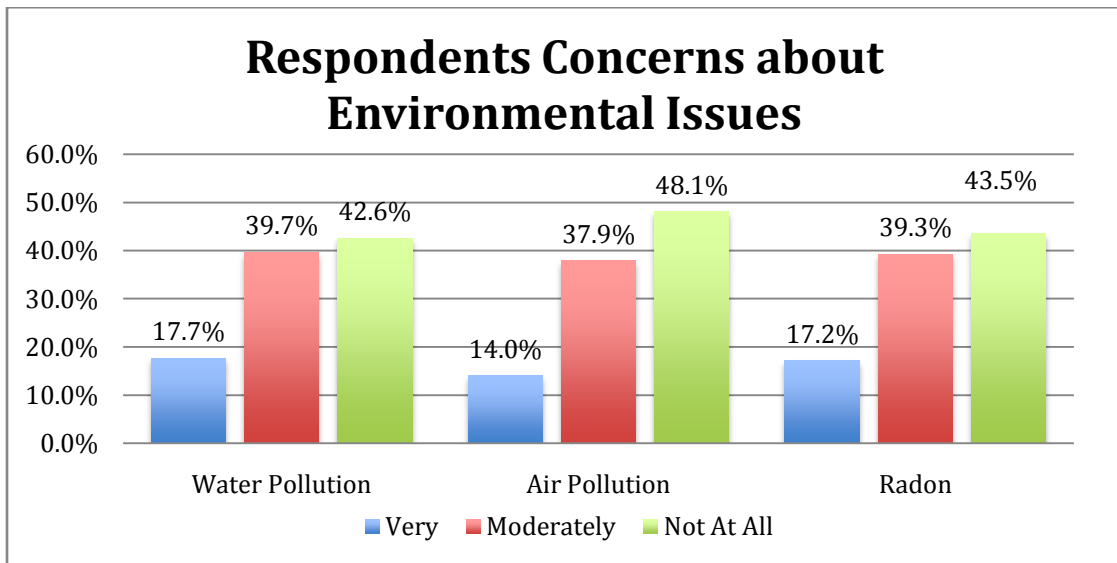
- 25 (or 21.9%) said it was excellent.
- 52 (or 45.6%) said it was good.
- 28 (or 24.6%) said it was adequate.
- 5 (or 4.4%) said it was insufficient.
- 4 (or 2.8%) were not sure.

ENVIRONMENTAL CONCERNS

Respondents on the CHNA survey were asked whether they were very concerned, moderately concerned or not at all concerned about three select environmental issues:

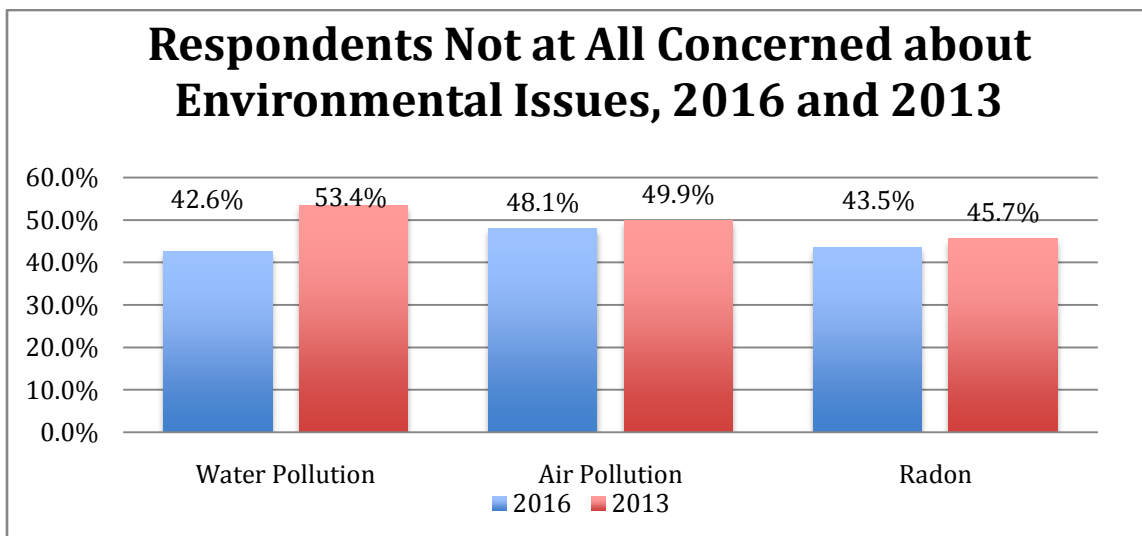
- Water pollution.
- Air pollution.
- Radon

Their responses showed they had little concern about these environmental issues.



Source: CHNA Survey, 2016

These results were similar to those found on the 2013 CHNA survey.



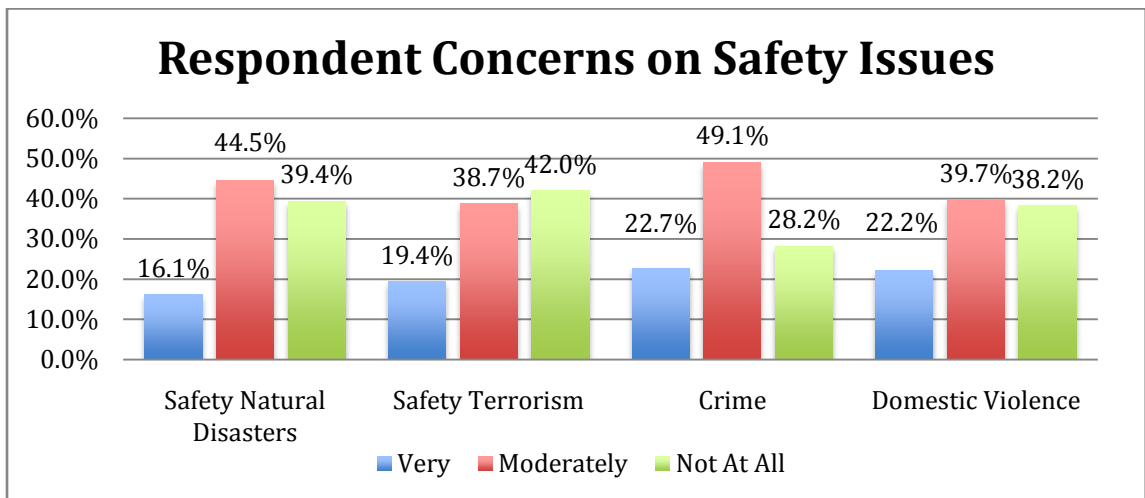
Source: CHNA Surveys, 2016 and 2013

SAFETY CONCERNS

Respondents on the CHNA survey were asked whether they were very concerned, moderately concerned or not at all concerned about four select safety issues:

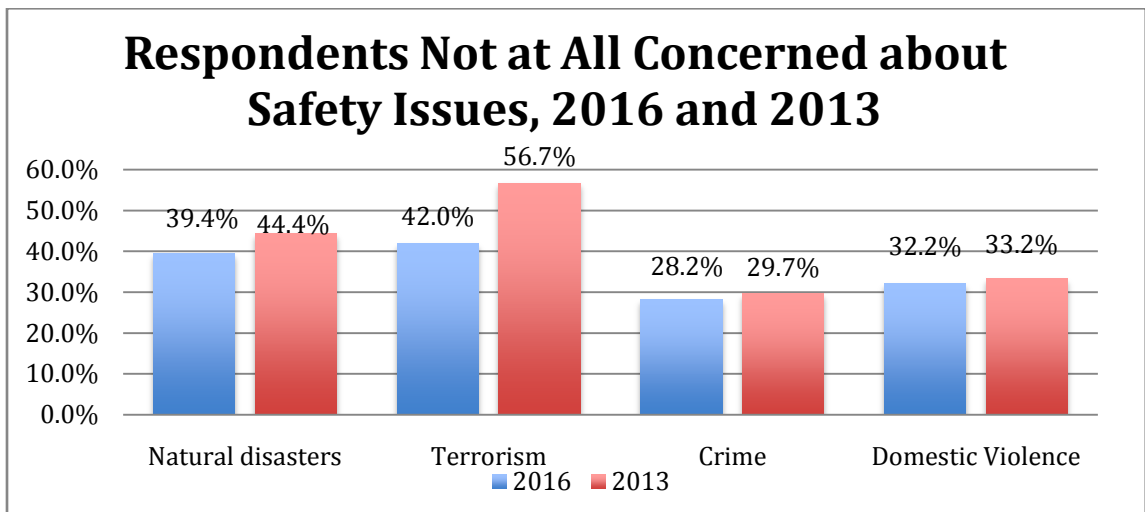
- Public safety in natural disasters like storms.
- Public safety due to terrorism.
- Crime.
- Domestic Violence.

Their responses showed they were only moderately concerned about these issues.



Source: CHNA Survey, 2016

These results were similar to those found on the 2013 CHNA survey.



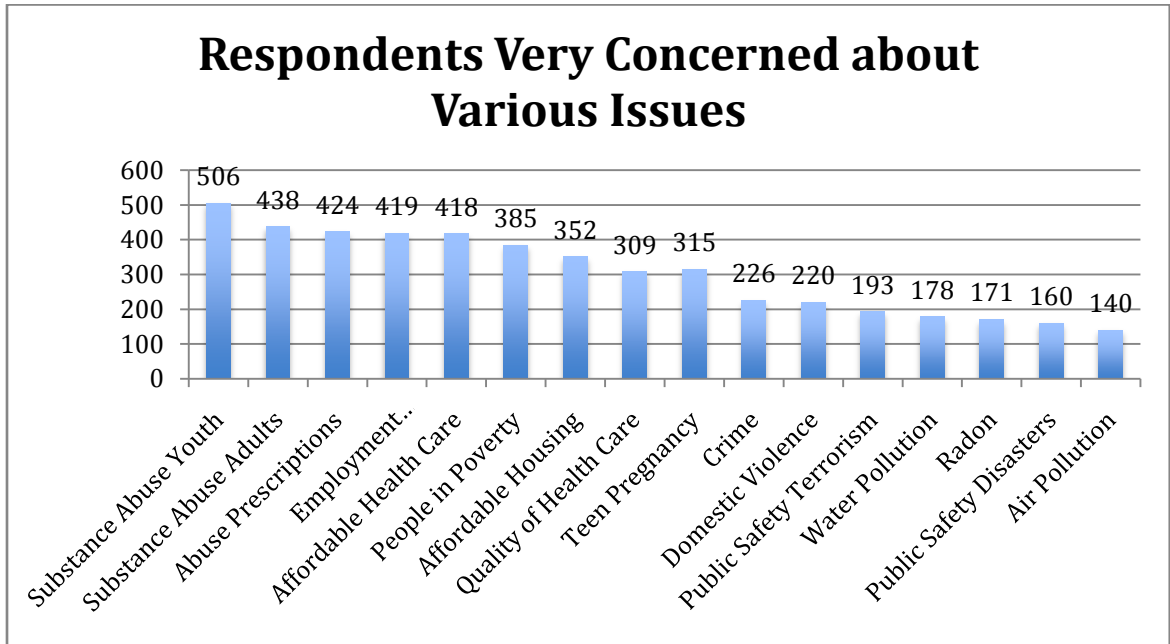
Source: CHNA Surveys, 2016 and 2013

The HSN members noted that domestic violence is often hidden. It can usually be tied to economic factors or substance abuse. The effect on children can have lifelong consequences even if the children are removed from the home.

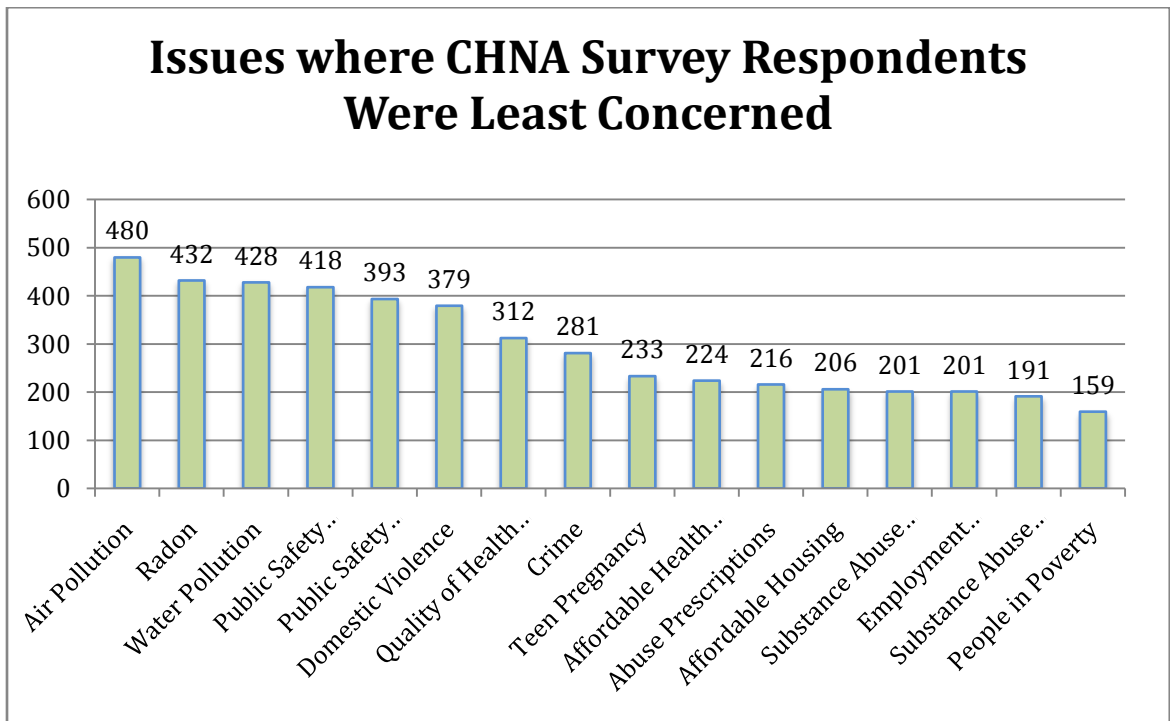
SUMMARY OF RESPONDENTS CONCERNS

Many issues were brought to the attention of the respondents for their evaluation as detailed in this report.

Here is a summary of the issues based on their concerns.



Source: CHNA Survey, 2016



Source: CHNA Survey, 2016

The top five concerns of the CHNA respondents in 2016 were compared to those in 2013. Respondents in 2016 were most concerned about substance abuse among youth.

Top Five Concerns of Respondents, 2016 and 2013	
2016	2013
Substance Abuse Youth	Affordable Health Care
Substance Abuse Adults	Employment Opportunities
Abuse of Prescriptions	Substance Abuse Youth
Employment Opportunities	People in Poverty
Affordable Health Care	Substance Abuse Adults

Source: CHNA Surveys, 2016 & 2013

The top five least concerns of the CHNA respondents in 2016 were compared to those in 2013. Respondents in 2016 were least concerned about air pollution.

Top Least Concerns of Respondents, 2016 and 2013	
2016	2013
Air Pollution	Public Safety/Terrorism
Radon	Air Pollution
Water Pollution	Water Pollution
Public Safety/Terrorism	Radon
Public Safety Disasters	Public Safety Disasters

Source: CHNA Surveys, 2016 & 2013

RECOMMENDATIONS BY COMMUNITY LEADERS

Primary data from the CHNA survey was presented in the form of a PowerPoint display to a general meeting of the Hillsdale Human Services Network (HSN) on Tuesday, April 19, 2016. Secondary data was included where appropriate to aid discussion.

In an open-forum discussion members were asked what they considered the major health issues facing the county. As an issue was introduced, it was recorded on paper along with comments made about the issue. Many of the comments they made have already been incorporated into this report in the appropriate area.

The members were given a short break during the meeting to consider what was discussed. When they regrouped, the members were asked to identify the most important health issue in the county and later asked to identify what they considered the second most important issue. The issues they cited in decreasing order were:

1. Access to care and more free screenings, especially for the working poor, including better access to specialty care and physical therapy.
2. Substance abuse issues, including opiate use and drug over prescription, as well as the need for better patient education on the safe use of prescription drugs.
3. Greater mental health access, awareness of depression, and education about mental health treatment resources available.
4. The increase in obesity among residents.
5. Domestic violence, recognizing it is often linked to substance abuse.
6. Shortage of medical specialists in the area, citing particularly child psychiatry and gerontology.
7. Misuse of the health care system.
8. Inadequate prenatal care and the need for infant safe sleep instruction.
9. Smoking, including the use of vapors, especially in pregnant moms.

When asked to identify the one issue they felt the hospital could best address, the members said in order of decreasing importance:

1. Access to care and more free screenings, especially for the working poor, including better access to specialty care and physical therapy.
2. Greater mental health access, awareness of depression, and education about mental health treatment resources available.
3. Substance abuse issues, including opiate use and drug over prescription, as well as the need for better patient education on the safe use of prescription drugs.
4. Inadequate prenatal care and the need for infant safe sleep instruction.

Members were then ask to identify one issue that their particular agency could help address. This exercise helped the individual members recognize and reinforce the importance of their role, and each other's role, in the overall health and wellness of community residents.

Finally, the members were asked in an open discussion format to make specific recommendations of what the hospital could or should do.

Their responses included:

- Encourage more physicians to take Medicaid.
- Employ more specialists.
- Help establish clinics in schools similar to the Branch County model.
- Hold more depression/dementia screenings.
- Provide access to physical therapy services for those without insurance.
- Reduce opiate prescription use by using the MAPS.
- Create at least one detox bed or area in the hospital.
- Create a wellness initiative, partnering with local companies.
- Train staff to better recognize domestic violence and substance abuse.
- Put in place a better referral system between the hospital and area professionals on issues such as domestic violence, substance abuse, and the follow-up of normal hospital discharges.
- Have a consistent presence at the monthly HSN meetings.